

**INDIAN
ECONOMY
DURING
THE 1980s**

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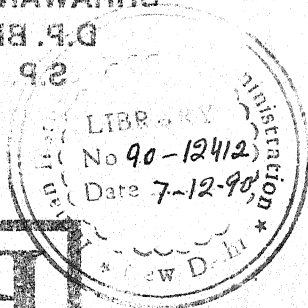
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Introduction

The 1980s has been an important decade for the Indian Economy. The content and pattern of development and the accompanying policies were different from those in the earlier decades. The rate of growth of the economy accelerated to exceed 5 per cent compared to the so-called 'Hindu rate' of 3.5 per cent in the earlier decades. But this acceleration in growth was accompanied by pronounced imbalances in the economy. The growth was largely in the services and in a part of the industrial sector. The large agricultural sector, supporting directly over two-thirds of the population, was more or less stagnant.

Even in the sectors where growth rates were high, employment growth was insignificant. Increase in wealth therefore went hand-in-hand with increasing inequalities. The government, further, was unable to tax away any significant proportion of this increased wealth. In the face of slowly increasing tax earnings, the government was plunged into a fiscal crisis.

The resulting deficits and the pattern of demand generated by concentration of wealth led to increased demand pressures which, on the one hand, had an inflationary potential and, on the other, created tremendous pressure on the balance of payments position. Intriguingly, the high growth rate was accompanied by stagnant rate of savings in the economy.

As the functioning of the economy favoured the economically powerful, so did the economic policies. Traditional industries suffered and employment growth was affected as new technologies entered with ease. The theology of the market ruled supreme and planning was reduced, by and large, to *ad-hoc* processes to help a small section of those millions who were being, at best, by-passed by the process of growth. The public sector and even public administration were affected by the virus of 'management' understood as the operation of technocratic, 'optimising' decisions. With the weakening of the economic role of the state, different economic interest-groups became sharply defined and increasingly assertive. The problems generated by the specific type of economic growth pursued were, it is becoming clearer, not confined

to the economic sphere alone.

These aspects of economic policy and economic performance are examined in this volume containing papers prepared by the Economic Analysis and Policy Group (EAPG) of the Indian Institute of Public Administration (IIPA) and the papers presented by distinguished scholars and administrators at a Seminar organised by the EAPG.

The EAPG was formed to continually undertake periodic reviews of the economy and economic policies and to present them in a simple and non-technical manner so as to reach a large cross-section of policy-makers, administrators, academicians and public men, without compromising on the rigour of analysis. This volume is being published with the hope that this initial effort will attract comments, suggestions and perhaps criticism so as to enable us to improve on the exercise to be repeated in the coming years. The IIPA has funded the research reports but academic freedom is maintained so that the individual authors are responsible for the views expressed in their papers.

We acknowledge with thanks competent research assistance provided by Sundar Prasad Das, Sanchita Bhattacharya and Pradeep Biswas. We also thank T. Jayalalitha for providing secretarial assistance to the Group.

P.K. UMASHANKAR

New Delhi,
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PART - I

1. Growth, Savings and Investment

KAMAL NAYAN KABRA

This paper is an attempt to analyse some major macro-economic indicators as they stood during or at the end of 1986-87 in the context of their medium-term trends. Such an exercise, it is hoped, may provide some insight into the broad performance of the economy, which may be useful for evaluating the effects of some macro-economic policies. The limitations of such macro-data, their timely availability apart, on account of some basic conceptual, theoretical, computational and coverage problems, are well known. However, an awareness of such limitations and efforts to supplement the analysis by reference to various related aggregates and some disaggregated information may still impart some utility to the exercise. We have not gone into various policies and some important sectors separately since they are being dealt with separately in the volume. The attempt is to inter-relate data on various variables, so that one may understand the current working of the economy a little better, particularly insofar as it impinges on the ways in which people make their living.

The exercise starts with an examination of the data on overall GDP growth rate, followed by that of per capita income and consumption expenditure. That is followed by bringing in per capita production of some key commodities which is the major influence on per capita availability.

Such a disaggregated picture is supplemented by some select price and employment statistics in order to indicate the performance of the economy in terms of providing the opportunities for earning the means of livelihood to people.

Then, we go into the sectoral composition of output and the changes witnessed in this respect. We try to bring out some key implications of

the structural features and disaggregation of some sectoral growth rates. This has been done with a view to examining the official claim of a pick-up in the growth rate over the 1980s.

In the next part we have examined the behaviour of savings and investment along with that of plan outlay. In conclusion, we piece together the main propositions made in the paper.

[I]

GDP Growth

It is claimed that "there is a strong evidence that the Indian economy is now on a new growth path. In the eighties, the average annual rate of growth has been 5 per cent which is much higher than the historical trend rate of growth. The industrial growth rate is increasing and, despite three successive weak monsoons, the food situation remains comfortable."¹ This may be considered a significant change, particularly in view of the Sixth Plan experience, which showed an annual average rate of growth of 5.3 per cent which, however, comes down to 4.4 per cent if adjustment is made for the lower rate of growth in the last year of the Fifth Five Year Plan. It has been argued² that if the peak GDP figure of the Sixth Plan achieved at the end of the Plan is compared with the pre-Sixth Plan peak, the annual compound rate of growth during the Sixth Plan period works out to be 3.6 per cent only. The rate of growth during the first year of the Seventh Plan (i.e., 1985-86) was 5.1 per cent and during 1986-87 it is also expected to be around 5 per cent³ compared to the last year of the Sixth Plan when the growth rate was only 3.7 per cent (the only other year of poor performance in terms of GNP growth rate during the Sixth Plan being 1982-83 which returned a rate of 2.6 per cent). Thus there seems to be an improvement in the growth of level of economic activities consistently for two years. This result may also be worth noting in the context of continuation of the overall growth rate achieved during the Sixth Plan period. As the *Economic Survey* notes, the achievement of such a growth performance despite a none-too-co-operative monsoon for three consecutive years has its apparent optimistic implications.

As a result, India's GDP at factor cost stood at almost Rs. 65 thousand crore at the end of 1985-86 at 1970-71 prices as against Rs. 50 thousand crore at the beginning of the decade in 1980-81. As can be seen

from Tables I and II (showing various macro-economic aggregates for the period 1970-71 to 1985-86 in 1970-71 prices), GDP at market prices crossed Rs. 72.2 thousand crore over the level of Rs. 55.2 thousand crore in 1980-81. It may be noted that after 1974-80, there has not been any year of a negative growth rate for the last seven years.

Per Capita Incomes

As a result of such a sustained growth, per capita net income at constant prices increased from about Rs. 700 in 1980-81 to nearly Rs. 800 in 1985-86. The results in terms of per capita net income, i.e., an increase of about Rs. 100 at constant prices over a period of six years may also be cited to sustain cautious optimism. The average annual rate of growth of per capita income of the order of 3.1 per cent over this period 1980-81 to 1985-86 is an improvement over the past performance. This can be seen from Table III.

An income of about seven rupees per person per day at current prices and about Rs. 2.19 per person per day at 1970-71 prices are by themselves an indicator that in terms of the conventional criteria of per capita income, widespread, endemic and extreme poverty remains basically undiminished. Looked at another way, per capita income in 1970-71 was about Rs. 1.74 per day. The present real income per person per day is about 45 paise higher than what it was in 1970-71, showing that, in real terms, per capita per day income has increased at an annual rate of less than 3 paise over this period.

Private Final Consumption Expenditure

A better indicator of standard of living than per capita income would be private final consumption expenditure. Table IV shows per capita private final consumption expenditure at 1970-71 prices. For ease of comparison, per capita income figures are also shown along with the per capita consumption expenditure figures.

The behaviour of per capita income, naturally, is as fluctuating as is the behaviour of GDP. For example (See Table III) during the Sixth Plan period, during 3 years the rate of growth of per capita income was less than the average rate for the period. If one takes into account the fact that the first year of the Sixth Plan gave a rate of growth of per capita income of 5.1 per cent after experiencing a fall in per capita income of

the order of 7.3 per cent in 1979-80, one would say that the year 1983-84 was the only year during the Sixth Five Year Plan which could be said to have brought about noticeable increase in per capita income of the order of 5.9 per cent. Though we are making a short-term review of the economy, we cannot loose sight of the basic fact that during the entire period since 1951 per capita incomes have grown at a rate of 1.3 per cent per annum only, as the semi-log trend rate of growth during the period 1951-52 to 1983-84 was 3.5 per cent p.a., while population increased at the rate of about 2.2 per cent⁴. For the period 1970-71 to 1983-84, the overall growth rate comes to 3.8 per cent p.a. showing that no noticeable acceleration has come about.

Furthermore, considering the fact that the rate of growth of agricultural production during the period 1951-52 to 1983-84 was 2.6 per cent p.a., which was about half of rate of growth of industrial production at 5.3 per cent, one can easily infer that for over 66 per cent of the population dependent on agriculture, the per capita incomes were almost stagnant while the disparity between industrial and agricultural incomes widened. On an average annual basis, the rate of growth of gross value added in agriculture during 1981-82 to 1985-86 was 2.7 per cent. It means a lower still net value added, hardly keeping pace with growth in agricultural population. About 75.5 per cent of the increased output during 1981-82 to 1985-86 was concentrated in Punjab, Haryana and U.P. It means, the rest of the country saw a fall in per capita income of agricultural population⁵, as in these parts either production was stagnant or marginally increased and in some areas even declined.

A recent study by the National Labour Institute showed the average annual earnings of agricultural and construction workers are Rs. 3600 and Rs. 4000 p.a. respectively. It means they have incomes below the poverty line of Rs. 6400 p.a. This affects about 100 million workers⁶.

Per capita daily private consumption expenditure in real terms was about Rs. 1.80. It can be seen that compared to an increase of about Rs. 100 in per capita income over this period, the increase in average consumption expenditure is of the order of about Rs. 60 only; the balance being accounted for by taxation and savings. Even without bringing into picture the question of distributional inequities, it is clear that both the present average level and the *magnitude* of growth (as distinct from its *pattern*) are not of a kind which, either by themselves or by indicating

long-term trends, can offer much hope of any marked improvement in living conditions for the average citizen. Afterall, even if trickle-down, or modified trickle-down, is to operate meaningfully, there has to be first enough growth so that there is enough to trickle-down. One may recall the exercise done in early 1960s by the Planning Commission which demonstrated that fairly long period of growth at 7 per cent per annum is necessary for the benefits of growth to percolate down to the lowest expenditure groups⁷. That our actual achievement was about half of the level envisaged as critical minimum underlines the fact that little perceptible change has come about in per capita daily consumption.

Per Capita Production of Some Wage-goods: A disaggregated view.

Per capita production of some select wage-goods (which represent a disaggregated dimension of per capita domestic product) for the Sixth Plan period and for the first year of the Seventh Plan (as shown in Table V) indicate the kind of potential generated by the growth process. It goes without saying that the actualisation of the potential, particularly for the less well-to-do, would be dependent on a number of factors like "Institutional arrangements for the ownership and use of means of production, the intensity of the growth process itself, the conditions of supply in the labour market and the extent of state intervention in economic processes."⁸

*Economic Survey 1986-87*⁹ Data regarding per capita availability of edible oils, vanaspati, sugar, and tea during 1985-86 (Provisional) at 4 Kgs, 1.3 Kgs, 10.9 Kgs and 426 grams respectively too show rather trivial change, except that in some cases, like edible oils there is a perceptible fall over the average for the Sixth Plan period at 6.1 Kgs, while there is a near continuous increase in sugar from 7.2 kgs in 1980-81 and for tea a movement to a level much below that attained during many years of the last decade. Per capita net availability of pulses during 1986 at 40.6 gms per day and at 38.1 gms in 1985 is practically the same as its average during 1980-1984 at 38 gms¹⁰. The implications of such changes in the production of wage-goods are not too helpful for encouraging the growth of productive and non-inflationary employment in the economy. The point which seems to emerge from the trends in per capita production and availability of some key wage-goods and in per capita income and private final consumption expenditure is that these do not provide any basis for expecting an improvement in living standards, particularly at the lower end of the spectrum. This likelihood may be

further strengthened if we took note of the trend in the wholesale prices of goods referred to above. These facts are presented in Table VI.

Except in the case of textiles and tea, which show a negligible change and a welcome fall in the prices of pulses in 1986-87 over the previous year, there was a large increase in the wholesale prices of the other goods. In all the cases 1985-86 price index for these goods was uncomfortably higher over the average for the preceding five years. In comparison to these price increases the changes in per capita production/availability of major wage-goods pale into insignificance, indicating that the poorer sections would hardly have been in a position to avail of the potential generated by marginal changes in these averages during the period under discussion. The impact of these trends in the production of wage-goods on the capacity of the economy to create productive employment in a non-inflationary way would also be insignificant.

The significance of these figures is to be seen in the context of the recent claims made on the basis of NSS data on consumption expenditure which are often quoted in official quarters to show a reduction in poverty ratio. Given the relative limitations of the data collected by the NSS as well as the figures given out by the CSO in National Accounts Statistics, one would find reasons to believe that the macro data computed by the CSO may be nearer the reality than what the NSS is able to capture. Not only the inter-sectoral shifts in the share of GDP produced in the primary, secondary and the tertiary sectors, regional imbalances and high rate of inflation and fairly moderate rate of growth of GDP but also indicative evidence regarding the direction of change in the distribution of income and wealth would tend to support the thesis that for a very large majority of our population, the actual level of per capita income and per capita final consumption would be much lower than indicated by the arithmetic mean income.¹¹

Endemic Inflation

The national aggregates, averages and rate of growth, discussed so far in terms of their value in 1970-71 prices, bear comparison with the trends expressed in current prices (as presented in Table VII and VIII). It is evident from these figures that the difference between constant and current prices statistics is growing. For example, GDP at current prices in 1979-80 was about twice the GDP at constant prices, but by the year

1985-86, the spread between the two became over three times, showing that inflationary processes are at work. Similarly, per capita income at constant prices in 1979-80 was a little over half of its value in current prices; by 1985-86, it became about 31 per cent. These facts are clear indicators of the incessant march of inflation. Thus it cannot be maintained that we have achieved growth with price stability.

It may be worthwhile to briefly refer to the implications of the use of wholesale price index as the deflator for purposes of arriving at the constant price macro-economic aggregates. It is well known that the wholesale price index does not cover the prices of services. Since the service sector is the largest sector of the economy and intra-sectoral linkages of services are no less important, the inadequate coverage of the deflator creates doubts about the accuracy of the constant price figures. Since the prices of goods and services (including household, business and government services) are not expected to be related in any specific manner, it is not easy to draw inferences about the likely movement of prices in general and of prices of services in particular on the basis of the movements of the prices of services in the price index on the extent of change in real national income remains somewhat indeterminate.

Fluctuations in GDP

Indian economy is subject to uncertainties and fluctuations in GDP. There has been no year of negative growth since 1979-80, despite many subnormal crop years. However, there were four occasions when a lower growth rate than that achieved during the preceding year was recorded. The coefficient of variation in national income during 1973-74 to 1979-80 was 0.728. During the subsequent period from 1981-82 to 1983-84, this measure declined to 0.413, indicating a reduction in the extent of fluctuations.¹² This, however, is not the same thing as the achievement of a steady growth path. A look at the performance of agriculture can provide an important clue to the fluctuations in GDP. During 1980-81 to 1985-86, there were two years of negative growth in agriculture, one year of marginal increment and one year of a significantly lower growth than during the previous year. During the same period, except for 1980-81 growth experienced by the secondary sector was around 5 per cent and during 1985-86 reached the level of 6.6 per cent.¹³ The tertiary sector continued to grow at a steady and relatively

faster pace. During the period 1981-82 to 1985-86 the average annual growth of the tertiary sector was 7.4 per cent comprising 12.2 per cent annual average growth of public administration and defence.

Sectoral Shares and Growth

The growth of GDP has been accompanied by important changes in its sectoral composition. It can be seen from Table IX that during the Sixth Plan period the share of agriculture and allied activities (primary sector) in GDP was lower (at 38.08 per cent) in 1984-85 than it was at its beginning (over 41 per cent in 1980-81). In 1970-71, the primary sector contributed about 48.5 per cent of the GDP. This is a continuation of the trend in evidence since the 1950s when the share of agriculture was almost 60 per cent.

There was not much change in the share of the secondary sector which oscillated at a level of little over 21 per cent. If mining is added to it, this sector would account for about a quarter of the GDP. The rate of growth of industry, power generation, etc. during the Sixth Plan was not of an order which could raise the relative share of the sector, 4.36 per cent was annual average for the Sixth Plan period. By 1984-85 the share of agriculture has come down to below 36 per cent. This is the outcome of relatively slow growth of agriculture. During the seventies, its yearly compound rate of growth was 1.7 per cent and during 1980-81 to 1985-86 it was 2.7 per cent. This is lower than the rate of growth of total GDP as well as that of secondary and tertiary sectors. Overall, the goods-producing sectors grew at an average yearly rate of 4.3 per cent during the Sixth Plan period. With agricultural growth rate of 1 per cent and industrial growth rate of 6.3 per cent during the year 1985-86, the relative position of the goods producing sector could not change favourably.

As against this, transport, communications, trade, financial sector and public administration and defence grew at a much faster rate of growth, giving an overall, yearly rate of growth of the service sector during the Sixth Plan of 7.1 per cent, with public administration and defence averaging to 12.1 per cent per annum. As a result, continuing the trend of structural retrogression, the share of service sector exceeded 40 per cent and made it the largest sector of the economy.¹⁴ During the decade 1976-77 to 1985-86, public administration, defence and other services recorded an annual rate of growth of 7.2 per cent

leading to a fall in the share of goods production from 65.4 per cent to 58.8 per cent.

It has been argued by some that this is in keeping with the tendency noticed in many developed and developing economies. This is not the place to go into this controversy.¹⁵ However, it may be pointed out that, the consequences of this structural pattern for growth of productivity, price stability, effective employment etc, cannot be helpful. As the RBI points out, "while growth in the tertiary sector is a sign of growing diversification of the economy, for a large country like India with a growing population and at its present stage of development, a strong and vibrant commodity producing sector is essential for achieving economic growth on a sustained basis."¹⁶ In fact, it may be argued that the faster rate of growth of the service sector may lead to an over-estimation of the real rate of growth of GDP in the economy insofar as larger money incomes distributed to those engaged in services are taken as their contribution to real GDP as well. After all, such money incomes, both their existing levels and increases, may or may not represent commensurate increase in the physical amount of services produced.

Had the service sector growth consisted mainly of health, education and such other community services, one could have made a positive evaluation of this pattern. Even the share of health, education, family welfare, etc; (social and community services and economic services) is only a little less than one percent of the former and ranged between 6.91 per cent and 8.36 per cent of the central government spending for the latter during 1983-84 to 1987-88 (BE), this kind of defence of over-expansion of services does not go very far. It has been suggested that in many developed and developing economies (in many of which the relative size of the service sector is comparable to that in India), the average rate of growth of GNP is found to lie between that of the agricultural and the manufacturing sector, while in India, it is more than that of agriculture and manufacturing. This may lend some support to the view that hypertrophy of service sector nominal income may lead to an over-estimation of the rate of growth of real GDP. This is why the growth based on over-expansion of services has been called "half-real and half-illusory."¹⁷

Emergence of Maldevelopment

Insofar as growth of GDP is taken to represent development, any disto-

rtion in its pattern may be taken to indicate maldevelopment. There are many indications of growing maldevelopment in our economy.

What we saw as over-expansion of service sector and relatively lower rate of growth of agriculture represent structural retrogression¹⁸ and a growing chasm between production and satisfaction of people's wants. Growing stocks of food-grains with public agencies, fall in the share of coarse grains in food production, changes in the composition of industrial output away from wage-goods and in favour of frivolities, growing unemployment and disproportionate growth of imports (as compared with that of GDP, industrial output and exports) are some of the signs of maldevelopment which make growth disfunctional.

Food stocks with public agencies had reached the level of 30 million tonnes and were in 1986 of the order of over 23 million tonnes. These levels are far beyond the prudent level of buffer stocks. Offtake from public distribution system, irrespective of leakages, misdirection and regional imbalances, during 1985 and 1986 were pegged at 15.80 and 15.84 million tonnes and fell short of procurement during the corresponding years by fairly large margins. The PDS could sell only 12.7 and 11.8 per cent respectively of the net availability of foodgrains during 1985 and 1986¹⁹, despite persistent incidence of poverty, malnutrition and rising food prices. This shows that despite various programmes for creating semi-productive 'employment' opportunities in rural areas, there was not enough purchasing power in the hands of the weaker sections to buy much needed larger quantities from the PDS.²⁰ It is an indication that increased food production and a subsidised, state distribution system are not adequate to ensure that increased food production leads to increased satisfaction of the needs for food and provide food security to the indigent masses.

Another factor may also account for the apparent disproportion between growing food production and reduction of hunger and malnutrition. In our food market, the share of coarse grains has been falling; three-yearly average of index number of cereals production for 1983-84 to 1985-86 stood at 130.7, while for wheat and rice it was 168.4 and 139.9 respectively.²¹ It means poorer sections and those residing in dryfarming areas have lower availability of production and purchasing power because of the relative decline of coarse grains. Furthermore, as mentioned earlier, the Annual Report of the RBI for 1986-87 has shown that just three states account for over three-fourths of the incremental

output of foodgrains in recent years. While the production of wheat during the eighties has consistently been rising and of rice has also increased every year except once, there have been many years when the production of coarse grains has slipped below the level attained in the preceding year. This shows that the growth of the staple food of poorer people and regions has fared poorly.

The industrial sector too has contributed to the pick-up in the overall growth rate. However, the composition of growing manufacturing output has been becoming increasingly biased in favour of non-wage goods like electronic goods, automobiles, synthetic textiles, beverages, etc. The relative importance of consumer durable goods in industrial production has increased. During the last two years the production of electronics industry has grown at a rate of around 40 per cent per annum and its weight in the new industrial index (base 1980-81) has increased. From Rs. 676 crore during 1985-86, production of consumer electronics has gone up to about Rs. 1100 crore. During 1970-71 to 1985-86, the annual compound rate of growth of certain select industries was as given in Table X.

According to *Economic Survey*, 1986-87, the industries which have shown a high growth performance in recent years are: electronics, petro-chemicals, garments, gem-cutting, etc.²² The spurt in automobiles has also been noticeable.²³ These trends show features of mal-development.

Employment in the organised sector at the end of June 1986 (quick estimate) stood at 250.37 lakhs, giving a growth rate over the preceding year of 1.6 per cent. In fact, private organised sector employment at the end of March 1985 was lesser than that at the end of 1982, after which it has successively moved down. During the first two years of the Seventh Plan, the employment targets remained unrealized by 20 to 30 per cent. Even small scale industries which produce nearly half of our industrial output and are known for their capacity for generating employment opportunities, slipped on this score. The number of employees of SSI, came down from 9.7 million in 1980-81 to 7.7 million in 1986-87.²⁴ This impact of liberalised industrial policy has rarely been noticed.

However inadequate the employment exchange data may be regarding open unemployment at a point of time, trends in those figures over-

time provide valuable clues to the supply side of the labour market. At the end of 1982 there were over 1.97 crore persons registered as job-seekers with employment exchanges. At the end of 1986, this number swelled to over 3.03 crore persons, showing that the rising trend in the rate of output growth during the first half of the eighties was accompanied by the addition of over one crore new job-seekers on the live registers of employment exchanges. As against this, yearly placements through the exchange were only 474, 486; 407; 388 and 356 thousand respectively from 1982 onwards into 1986; a disturbingly falling number.²⁵ These facts show a growing incapacity of the economy to satisfy the needs of its members for work and consumption, despite growing output. It is in this sense that one characterises this growth as maldevelopment

The behaviour of the general price level (wholesale and consumer) and of the external sector (which are not taken up here) would lend further support to our conclusion. In fact, it can be argued that the growing volume and rate of savings and fixed capital formation (as discussed below) which contribute a great deal to growth of GDP are also showing reduced effectiveness. This too may be a sign of maldevelopment, as the current sacrifices are yielding lower returns than in the past.

The share of GDP originating in the organised sector increased from 27.5 per cent in 1970-71 to 37.8 per cent in 1984-85, with corresponding reduction in the share of the unorganised sector. While this may be taken as an index of growing modernisation, the continued preponderance of the unorganised sector for providing the means of livelihood and participation in economic activities tend to make it another facet of structural retrogression. Viewed in the context of growth of unemployment, large share of landless agricultural labour in the total workforce (at about 27 per cent) and an addition, on an average, of about 1.1 million marginal landholdings every year²⁶, reduction in employment in small industries sector, and low level and slow growth of employment in the organised sector, the rising trend of the share of the organised sector in the economy may point to social and structural imbalance, i.e., a process of growth and change without its social dual.

Another form in which the disjunction between growing output on the one hand and employment and expenditure in the form of greater consumption and capital formation on the other can be seen in the form

of the behaviour of changes in stocks witnessed over these years. As a result of various policies and programmes for fostering growth, output has increased but, without reduction in unemployment and reasonable price stability, does not get fully or mainly reflected in increased consumption and fixed capital formation. This may get reflected in the large size of changes in stocks, not so much its absolute level, but its absolute level, but its magnitude in comparison to the additional capital formation and consumption. As can be seen from Table XI, changes in the stocks were over 3 per cent of GDP and at times were as much as around 4 per cent. *This component of GDP accounted for a better part of growth of output: during certain years it even exceeded the growth of output.* Changes in stocks consistently exceeded by huge margins additional gross domestic capital formation and, except for 1980-81, also additional private final consumption expenditure. Given our pressing needs for additional capital formation and improved standard of living, the magnitude of changes in stock (a considerable part of which consists of food stocks), apart from entailing direct costs, both social and financial, is a symptom of some serious distortions in the economy. Even as a proportion of gross domestic fixed capital formation, the changes in stocks are rather large, generally in excess of 18 per cent and in certain years as high as over one-fourth.

The discussion above regarding recent trends in GDP and some related aggregates highlights the fact that the optimism which is being generated by official economists on account of fulfilment of plan targets of growth over some recent years seems superficial. A close scrutiny of these macro aggregates shows many serious distortions and, taken together with the trends in unemployment and price rise, can point towards some of the persistent problems Indian planning and policy have yet to respond to adequately. Since this period has also seen some definite moves towards a change in the economic policy regime towards liberalisation, the trends discussed above tend to indicate that the new thrusts may possibly yield higher rates of growth of output at least for a certain none-too long period, but these additional flows, consisting mainly of services and stock build-up, may fail to make themselves useful to society in terms of work opportunities, higher consumption, greater capital formation and reasonable price stability, leaving out the question of external viability. In fact, the sacrifice in terms of savings and investment for achieving this growth too may be high and rising. To this question we may now turn.

Savings, Investment and Plan Outlays

The conventional wisdom on development emphasises growth as the key objective variable and savings and investment as the key instrumental variable. Indian planning and economic policies direct their energies to pushing up the rates of savings and capital formation, both by means of domestic policies and attracting external contributions. We have crossed the Lewis barrier of 12 per cent net savings rate since early 1970s and lately our savings rate, according to official statistics, which strikes asceptical note in many quarters, has almost approached a quarter of our GDP (MP). (See Table XII). It can further be seen that the rate of domestic capital formation too has risen, generally keeping ahead of the savings rate.

It may be noted that Indian official savings data are presented at current prices only and hence there are complications in comparing a real capital formation time series with nominal savings rate time series. These are many other factors which tend to indicate that our savings statistics may not be very firm, e.g., in certain years net savings rate as per cent of NNP at current prices jumped up by over 58 per cent (as in 1977-78) and household contribution to it rose by as much as 67.5 per cent. The financial savings data donot seem to leave much scope for straining one's credulity, as they are based on official monetary and banking statistics. The problem areas are physical capital formation, particularly the savings of non-incorporated business, which are subsumed, strangely, under household sector, as if all non-incorporated business were small-commodity family production units. Given the limitations of the data on the behaviour of savings and investment, one can draw some cautious inferences from the trends seen during the 1980s.

For one thing, savings and investment have lately been fluctuating below the peak reached during 1978-79, when we also had a fairly comfortable position with respect to foreign exchange and food stocks. Net savings and investment are presently considerably below the level of 20 per cent and 18 per cent reached in 1978-79. The rate of net domestic fixed capital formation is still lower as nearly one-fifth of domestic capital formation is in the form of changes in inventories.

During this period the savings rate has, with a new expectations, increased at a rate faster than that of GDP. However, its range of fluctua-

tions has been very wide; from being over 58 per cent during 1977-78 to 0.4 per cent during 1979-80, i.e., immediately after the peak level of savings was reported for 1978-79. One can see a deceleration in the growth of savings during the early eighties from 15.7 per cent in 1981-82 to 10.5 per cent in 1985-86.

Another notable thing is that while the share of public sector in both gross and net savings has fallen, its share in capital formation has gone up. (Table XIII). With lower internal savings, public sector now accounts for almost 50 per cent of domestic capital formation. This may be a factor making the problem of mobilising resources acute; but it may also indicate the economic liberalisation has not succeeded in inducing larger investment from the private sector, notwithstanding the scheme of resource allocation in the Seventh Plan with larger role for the latter. As one can see (Table XIII), plan outlay is *many times more than* public sector capital formation. Partly this is because the plan outlay figures have been expressed in current prices, while investment figures are expressed in constant prices. But, more importantly, lately current public expenditure has become the major factor as against public investment. This may indicate the growing role of various plan schemes and programmes which do not add to, or add limited amounts to, physical capital formation. Various rural employment and asset distribution (not creation) programmes and lately growing allocation for education may be a related factor; not to speak of rising expenditure on defence, interest payments and various subsidies.

A close look at domestic savings, in the form of its sectoral origins and forms (Table XIV & XV) may enable one to understand these facts better. It can be seen that the contribution of the household sector has increased very steeply since the end of the seventies. Now it exceeds ninety per cent. This shows corresponding reduction in share of private corporate sector (down to less than 4 per cent) and even steeper decline in public sector savings (though larger than that of the corporate sector). The administrative departments are dissaving; an indication of runaway increase in current public spending. The contribution of public enterprises has increased; which is in keeping with the Seventh Plan's scheme of resource mobilisation which relies heavily on the contribution of the public enterprises.

The increase in the household sector's financial savings (as against in the form of physical assets) is quite marked and indicates the

operation of certain identifiable trends in the economy. For one thing, the role of financial intermediation is going up. The unorganised and petty-production segment of the household sector which is the one that generally undertakes creation of physical assets has apparently lost its relative position to the more organised and larger segment. In this sense this fact indicates worsening distribution of income and assets in the economy.

Along with the increase in the share of household savings in the form of financial assets, there has come about during the last few years a significant increase in savings in the form of shares and debentures, which accounted for nearly 7 per cent of financial assets in 1985-86 against a bare 1.15 per cent in 1970-71 and less than 2 per cent in 1976-77 (Table XIV). To a certain extent, this is attributable to the policies of economic liberalisation which have improved the investment climate. Moreover, its socio-economic significance also lies in the fact the private corporate sector is able to make an enlarged draft on the savings of the household sector. This is another index of the growth of the organised sector. Insofar as the investing public constitute a very small and narrow minority of Indian society, this growth in the number of coupon-clippers cannot be taken as index of the growth of entrepreneurship. The latter development requires strengthening and growth of the incorporated and small enterprises of which there is little indication. However, growth of the capital market and its vitality is a sign of the growth of capitalism which is developing sources of finance outside the State sphere. The recent change of mood in the stock market tends to show, however, that this spurt may have been owing more to speculative elements in the share market than can be attributed to real and more durable factor.

Composition of financial assets (as can be seen in Table XIV) has undergone many notable changes. It is a measure of financial development that the share of currency held by the public has come down: The average annual share during the first half of eighties being 11.7 per cent against 14.1 per cent during the entire seventies. Concurrently, the share of bank deposits has increased. The popularity of other instruments, including that of government bonds, seems to have adversely affected insurance. While the organised sector has grown, it may appear paradoxical that the share of Provident Fund accumulations has come down. However, this is only a relative decline. It may point to slow

growth of organised sector employment. What is the most striking development in the financial sphere is the phenomenal growth in the claims on government from about 3 per cent in 1970-71 to over 16 per cent in 1985-86. During the interregnum, the share of public debt rose to over one-fifth of all the financial assets. The average for the last five years at 12.4 per cent shows how a captive public bonds market has emerged as the major financial prop for public spending, giving rise to fears of internal debt-trap.

It can be said that despite comparatively higher rates of savings and investment, commensurate contribution to GDP has not been obtained. This can be seen in the form of rising incremental capital-output ratio (ICOR) which at 1978-79 prices stood over the period 1978-83 at 4.85, compared to 4.65 during the Fifth Plan period. This complex problem of lower returns from additional savings is a symptom of reduced effectiveness of investment. While many factors are often cited to explain the trend, factors like inefficiency and systematic alienation standing behind weaker work ethics do not seem to receive adequate attention

Planning, fiscal, monetary, industrial, agricultural and external economic policies, etc., are directed mainly at undertaking public investments and encouraging private savings and investment in order to accelerate growth. Even though the rates of savings and investment have been lower than the peaks reached earlier, they have maintained fairly high levels. Another important thing has been that these rates are fairly stable. Even in terms of rate of growth, net investment has been fairly stable from 1976-77 to 1985-86. During the first five years, net investment rate at current and constant prices increased at an average rate of 18.1 per cent and 16.3 per annum respectively. During 1981-82 to 1985-86 these were 18.5 per cent and 15.3 per cent respectively.²⁷

These fairly high and stable rates failed to produce stable rate of growth of real GDP. We have seen the extent of fluctuations in the rate of growth of national income. We have also seen that despite steady growth of investment and current inputs in agriculture, its growth has been unsteady. Industrial output too was fluctuating considerably. It is only the service sector which saw large and steady expansion, largely on account of rising public expenditure.

ups and downss do not seem to be closely associated with the rate of growth of net investment. It is factors like the rate of capacity utilisation in industry, the extent and temporal and spatial spread of rain fall, the psychological impact of policy changes, allocation of public funds to various services, variations in the availability of infrastructural support, international factors, etc. which seem to exercise relatively greater influence on the growth rate of economy. The rate of savings and investment thus seems to have a more pronounced impact in the long-run than in the short-run. Partly this is also owing to gestation lags and difficulties in the growth of adequate market for many goods.

Excessive and often exclusive concern with savings, investment and growth in most of the public policies and planning do not seem to be capable of responding to the structural, institutional and problematical aspects of Indian economy, especially in the short-run. The development of productive forces which investment brings about does indeed create a valuable long-term potential. However, without a set of highly differentiated policies, which in their close mutual complementarity can address themselves simultaneously to a host of problems, rigidities and distortions, one cannot reasonably expect a thaw. This is not the occasion to go into an examination of overall macro policies and alternative policy designs. It may suffice just to mention that poverty, inequity and unemployment have to be treated as the prime, closely inter-connected facets of underdevelopment and plans and policies have to be devised for dealing with these issues simultaneously, directly and in a modest but measurable way in the immediate run as well. On basic issues the short-run and long-run cannot be so dichotomised that the long-run can be expected to produce results diametrically different from those produced in small tricklets in the short-run.

A closer look at the size and composition of the annual plan outlays during the first two years of the Seventh Plan may, in the background of the short-run relation between investment and growth discussed above, may be useful. As can be seen from Table XVI, the revised figures for 1985-86 exceed the original outlays on account of higher agricultural and irrigation and flood control outlays. The plan for 1986-87 involves higher outlays than in the preceding year even in terms, with the inter-sectoral allocation largely following the same pattern. It is difficult to read significant short-run implications from the size and pattern of these allocations.

The process of annual plan formulation is largely a tripartite exercise involving the Planning Commission, Ministry of Finance and State governments. The medium term plan does not incorporate either the principles for the annual phasing of the plan or an actual pattern of phasing. Hence current political and economic situation, both external and internal, particularly with respect to harvest level, price situation, foreign exchange availability, including the commitments obtained from the Aid India Consortium and current political pressures, can be expected to play a large role in the determination of the annual plan-size and its scheme of allocation. The fact that investment and growth are fairly, weakly and non-systematically related to each other goes to detract from the significance of fulfilment of the plan in financial terms—whether in real or nominal terms. However, plan outlay being the major component of public spending, gets reflected in the growth of GDP, particularly in the service sector. In our kind of economy, various public policies and market forces are no less important than plan programmes and projects. While market forces have greater influence on the plan finances than the other way round, public policies do not seem to be firmly based in the logic of the plan.²⁸ These propositions do not seem over public outlays could be expected to have increased. However, instead of strengthening public control and thereby the effectiveness of planning, the policy changes seem to have contributed to weakening of public control and planning *vis-a-vis* the market forces.

Some Conclusions

It emerges from our discussion that though the growth performance has tended to improve since the Sixth Plan, it is fluctuating, sectorally-imbalanced with excessive emphasis on services, particularly public administration, defence and financial services, changes in stocks and is not accompanied by commensurate changes in occupational structure. The changes in inventories play a larger role than could probably be functionally justified. Many indications are emerging pointing towards maldevelopment.

In terms of international comparisons, the 'higher growth path' has not improved our relative position. In 1965, the size of the Chinese economy was 41 per cent larger than that of the Indian in terms of their respective GDPs. By 1985, the margin has increased to 51 per cent. Similarly, the size of the Pakistan economy has increased from being

12 per cent to 16 per cent over the period 1965-1985. From being the largest developing market economy in 1965, India now ranks after Brazil and Mexico.²⁹

Per capita final consumption expenditure and per capita production of some critical wage-goods show that a great deal remains uncomplicated in these matters bearing on the economic wellbeing of the common man. Savings and investment have reached, in absolute and comparative terms, fairly high levels. However, recent trends in savings have been that of deceleration. Household sector has become practically the sole saver with decline in the savings role of public sector and private corporate sector with the ratio of financial savings going up significantly. There is not only absence of firm and regular relationship, between capital formation and growth of GDP but capital-output ratio has also increased. Plan outlays have generally been maintained though the policy aspects of planning do not seem to be receiving adequate attention. Instead of public investment, public expenditure seems to be becoming relatively more important. In sum, an examination of the performance of the Indian economy in terms of some macro aggregates over a short-run goes some distance in pointing out its present situation and future challenges.

Table 1.
Macro Economic Aggregates and Population, 1970-71 to 1985-86
(At 1970-71 Prices)

Item Year	gdp at factor cost	ndpat factor cost	gdp at market prices	ndpat market prices	pfce	gdpcf	ndcf	change in stock	per capita gnp at factor cost	per capita nnp at factor cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1970-71	36736	34519	40263	38046	29838	7177	4960	1039	673.8	632.8
1971-72	37312	35026	41195	38909	30709	7556	5270	1273	667.9	626.6
1972-73	36940	34526	40931	38517	30093	7130	4716	420	646.0	603.4
1973-74	38722	36269	42446	39993	30914	9097	6644	1679	663.6	621.3
1974-75	39080	36712	42538	40170	31190	8244	5876	2091	657.0	617.0
1975-76	42890	40365	46802	44277	33530	8468	5938	1874	705.1	663.5
1976-77	43160	40513	47298	44651	33417	9316	6669	1562	694.8	652.1
1977-78	46920	44140	51164	48384	36988	10207	7427	781	738.6	694.7
1978-79	49619	46593	54563	51537	38772	12304	9278	2224	736.6	717.0
1979-80	47191	44094	51937	48840	36895	11024	7927	2219	711.3	664.7
1980-81	50623	47326	55291	51994	41088	12227	8930	2488	746.8	698.3
1981-82	53470	49136	58598	55064	42450	12468	8934	2267	770.4	719.5
1982-83	55068	51350	60751	57033	43960	12652	8934	1875	773.9	721.5
1983-84	59441	55589	65493	61533	47477	13138	9172	2113	818.5	763.8
1984-85	61838	57654	67993	63809	48366	13846	9662	2267	831.1	774.6
1985-86	64988	60548	72774	67834	49756	14477	10037	2237	856.5	797.7

Source :- National Accounts Statistics, Jan 1987.

(For all the Tables unless otherwise stated)

Note :- gdp - Gross Domestic Product, ndp - Net Domestic Product, gnp - Gross National Product, nnp - Net National Product, gds - Gross domestic Savings, nds - Net Domestic Savings, pdi - Personal Disposable Income, pfce - Private Final Consumption Expenditure, gdpcf - Gross domestic Capital Formation, ndcf - Net Domestic Capital Formation, ndtcf - Net Domestic fixed capital formation. Rate of gross savings and gdf are percentages to gdp at market prices. Rate of net savings, ndcf and ntfce are percentages to ndp at market prices.

Table II
Macro Economic Aggregates and Population, 1970-71 to 1985-86
(at 1970-71 Prices)

Year	Rate of gdcf	Rate of nfcf	Rate of ndcf	Growth in gnp	growth in nnp	Population (in Million)
	12	13	14	15	16	17
1970-71	17.8	13.0	10.4	5.6	5.6	541
1971-72	18.3	13.5	10.3	1.4	1.4	554
1972-73	17.4	12.2	11.1	(-) 1.0	(-) 1.4	567
1973-74	21.4	16.6	12.5	5.1	5.3	580
1974-75	19.4	14.6	9.4	1.2	1.5	593
1975-76	18.1	13.4	9.1	9.9	10.1	607
1976-77	19.7	14.9	11.9	0.6	0.4	620
1977-78	19.9	15.4	13.8	8.7	8.9	634
1978-79	22.6	18.0	13.7	5.8	5.6	649
1979-80	21.2	16.2	11.7	(-) 4.7	(-) 5.2	664
1980-81	22.1	17.2	12.4	7.4	7.4	679
1981-82	21.3	16.2	12.1	5.4	5.3	694
1982-83	20.8	15.7	12.4	2.6	2.4	709
1983-84	20.1	14.9	11.5	8.0	8.1	724
1984-85	20.4	15.1	11.7	3.7	3.5	739
1985-86	20.0	14.8	11.6	5.1	5.1	754

Expected growth rate during 1986-87 around 5 per cent.
Abbreviation as at the bottom of Table I.

Table III

Rate of Growth: Per Capita Net National Product

	(%)
Fifth Plan period	2.9
1979-80	(-) 7.3
Sixth Plan period	3.1
1980-81	5.1
1981-82	2.9
1982-83	0.3
1983-84	5.9
1984-85	1.4
1985-86	3.0

Source: *Economic Survey: 1986-87*, p. S-1

Table IV (in 1970-71 Prices)

S.No.	Year	Per Capita Private final consumption expenditure	Per Capita income (NNP) (FC)
1.	1980-81	Rs. 605.12	Rs. 698.3
2.	1981-82	Rs. 611.67	Rs. 719.5
3.	1982-83	Rs. 620.03	Rs. 721.5
4.	1983-84	Rs. 655.76	Rs. 773.8
5.	1984-85	Rs. 654.48	Rs. 774.6
6.	1985-86	Rs. 659.89	Rs. 797.7

Source: CSO, *National Accounts
Statistics: January, 1987*.

Table V

		Foodgrains grams per day	Cotton Cloth meters	Total Textiles (per annum)
1.	Fifth Plan Period (1974-79)	440.8	11.3	14.3
2.	Annual Plan 1979-80	410.4	10.1	14.7
3.	Sixth Plan Period 1980-85 (Provisional)	455.4	10.5	14.4
4.	Seventh Plan Period (1985-86)	478.1	10.8	14.8

Source: Rajya Sabha Unstarred Question, 1984, 12/3/1987, by Minister of State for Planning. (Taken from *State Bank of India Monthly Review*, July 1987.

Table VI

Select Price Trends (Base 1970-71)

Wholesale Price Index Numbers for

S.No.		Rice	Wheat	Pulses	Tea	Edible Oils	Cotton cloth
	Average for						
1.	1980-81 to 1984-85	250.8	202	348.4	338.6	275.4	239
2.	Average for 1985-86	284	226	463	413	288	270
3.	April 1986 to December 1986	303.7	234.3	408.3	418.4	367.1	272.1
4.	Percent Change in (2) over (3)	6.94	6.67	(-) 11.8	1.3	21.5	0.7

Source: Computed from *Economic Survey, 1986-87* pp. S-50, S-51.

Table VII
Macro Economic Aggregates and Population, 1970-71 to 1985-86
(At Current Prices)

Items Year	gdp at factor cost (2)	ndp at factor cost (3)	gdp at market price (4)	ndp at market prices (5)	pdi (6)	pfee in domestic market (7)	gdcf (8)	ndcf (9)	ndfcf (10)	gds (11)
1970-71	36736	34519	40263	38046	33062	29838	7177	4960	3921	6783
1971-72	39274	36873	43367	40966	35282	32103	7986	5585	4200	7508
1972-73	43295	40619	47919	45243	39226	35157	8130	5454	4937	7833
1973-74	53826	50793	58994	55961	41930	42973	11824	8791	6438	11432
1974-75	63342	59796	69674	66128	57204	52102	13379	9833	6201	12726
1975-76	66630	62567	74344	70271	60685	53078	14811	10738	7513	14928
1976-77	71665	67157	80198	75690	64326	54533	16721	12213	9811	18030
1977-78	80931	75939	89848	84856	73574	63189	18765	13773	12371	20230
1978-79	87214	81477	97748	92011	79150	69259	24266	18529	14421	24138
1979-80	95358	88660	107542	100844	86743	75199	25278	18580	13744	24698
1980-81	113548	105445	127453	119350	105743	90939	31476	23373	17125	29375
1981-82	130774	120973	147684	137887	119090	103459	36073	26279	19833	33458
1982-83	145961	134498	165136	153663	131754	113792	39941	28468	22911	37368
1983-84	172704	16876	194061	180613	157847	135592	45607	32159	25465	43083
1984-85	190888	175489	214385	198986	173421	145962	52389	36990	28974	49090
1985-86	215024	197178	243551	225705	195573	163506	59916	42070	34163	55431

Note: Gross Domestic Product, ndp - net domestic product, gnp - gross national product, nnp - net national product, gds - gross domestic savings, nds - net domestic saving, pdi - personal disposable income, pfee - private final consumption expenditure, gdcf - gross domestic capital formation, ndcf - net domestic capital formation, ndfcf - net domestic fixed capital formation. Rate of gross savings and gdcf are percentages to gdp at market prices. Rate of net saving, ndcf and ndfcf are percentages to ndp at market prices.

Table VIII
Macro Economic Aggregates and Population, 1970-71 to 1985-86
(At Current Prices)

Year	nds	per capita gdp at factor cost	per capita nnp at factor cost	rate of gross savings (percent)	Rate of net savings (percent)	rate of gdpf (percent)	rate of ndcf (percent)	rate of ndfcf (percent)	growth in gdp at factor cost	growth in nnp at factor cost	population (in million)
	12	13	14	15	16	17	18	19	20	21	22
1970-71	4566	673.8	632.8	16.8	12.0	17.8	13.0	10.4	8.7	8.3	541
1971-72	5107	703.7	660.3	17.3	12.5	18.4	13.6	10.3	6.9	6.1	554
1972-73	5157	758.3	711.1	16.3	11.4	17.0	12.1	11.0	10.3	10.2	567
1973-74	8299	922.4	870.1	19.4	15.0	20.0	15.7	11.6	24.5	25.2	580
1974-75	9180	1063.2	1003.5	18.3	13.9	19.2	14.9	10.7	17.9	17.9	593
1975-76	10855	1093.5	1026.4	20.1	15.4	19.9	15.3	14.0	5.3	4.7	607
1976-77	12522	1152.1	1079.4	22.5	17.9	20.8	16.1	14.6	7.6	7.4	620
1977-78	15238	1272.8	1194.1	22.5	18.0	20.9	16.2	15.7	13.0	13.1	634
1978-79	18401	1341.4	1253.0	24.7	20.0	24.8	20.1	13.6	7.8	7.4	649
1979-80	18000	1438.4	1337.5	26.0	17.8	23.5	18.4	14.3	9.0	9.6	664
1980-81	21272	1676.7	1557.3	23.0	17.8	24.7	19.6	24.4	19.2	19.1	679
1981-82	22651	1884.2	1743.0	22.7	17.2	24.4	19.1	14.1	14.9	14.4	694
1982-83	25896	2049.1	1887.3	22.6	16.9	24.2	18.5	14.2	11.1	10.6	709
1983-84	29636	2371.7	2186.0	22.2	16.4	28.7	17.8	14.7	18.2	18.3	724
1984-85	33691	2048.4	2354.8	22.9	16.9	24.4	18.6	15.2	10.3	10.3	739
1985-86	37585	2832.3	2544.6	22.8	16.7	24.6	18.6	15.2	12.7	12.5	754

Table IX
Sectoral Shares in Real GDP (Per cent)
(At 1970-71 Prices)

S.L.No.	Sector	1980-81 (1)	1981-82 (2)	1982-83 (3)	1983-84 (4)	1984-85 (5)
1.	Primary Sector	41.6	41.1	38.8	39.7	38.08
(a)	Agriculture	39.2	38.8	36.4	37.3	35.63
2.	Secondary Sector	21.6	21.4	21.9	21.3	21.60
(i)	Manufacturing	15.2	15.2	15.8	15.3	15.50
(ii)	Construction	4.8	4.6 4.5	4.3 -		
3.	Service Sector	36.8	37.5	39.3	39.0	40.32
(i)	Transfer, Storage & Communication	6.7	6.9 7.2	7.1 -		
(ii)	Trade, Hotels & Restaurants	12.1	12.3	12.7	12.4	--
(iii)	Banking & Insurance	2.5	2.6 2.8	2.9 -		
(iv)	Public Administration & Defence	6.9	7.3 8.0	8.3 -		
	GDP	100	100100	100100		

Source : - National Accounts Statistics, Jan 1986 and Press Note-No. p. 20(15/3/86/NAD NAI) I entitled "Quick Estimates of National Income, Consumption Expenditure, Saving and Capital Formation ; 1984-85" dt. 28-1-1986

Table X

1. Coal: 5.2 per cent	7. Bicycles: 4 per cent
2. Beverages: 11.4 per cent	8. Radio receivers: (-)2.5 per cent
3. Blended yarn: 13.6 per cent	9. Coffee: 5.5 per cent
4. Two-wheelers: 14.4 per cent (*)	10. Cotton cloth (total): 1.3 per cent
5. Commercial Vehicles: 6 per cent	11. Cotton cloth (mill sector): (-)2.9 per cent
6. Railway Wagons: 1.1 per cent	

(*) During 1986 the growth rate was 20 per cent. (*Economic Times*), 8 October, 1986)

Table XI
Changes in Stocks and Other Macro Aggregates
(in 1970-71 prices)

Year	Change in GDP (MP)	Change in Stocks	Change in GDCF	Change in PFCF	(3) as % of GDP	Annual Rate of Growth of GNP %	Changes in stocks as per cent of Gross Domestic Fixed Capital Formation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1980-81	3354	2488	1203	4193	4.50	7.4	25.56
1981-82	3307	2267	241	1362	3.87	5.4	22.11
1982-83	2153	1875	184	1510	3.09	2.6	17.10
1983-84	4742	2113	480	3517	3.23	8.0	18.38
1984-85	2500	2267	714	889	3.33	3.7	18.35
1985-86	4281	2237	613	1390	3.09	5.1	NA

Source :- National Account Statistics
January, 1987

Table XII
Savings & Capital Formation in India

(In Rs. crores)

Year	GDS at Current Prices)	NDS	GDCF	NDCF	Change in Stocks	Rate of GDS	Rate of NDS	Rate of GDFC	Rate of NDCF	Rate of NDFCF
1950-51	975	651	2379	1641	334	10.2	7.0	12.9 (10.0)	9.3 (6.8)	7.4
1960-61	2063	1327	4523	3349	769	13.7	9.3	16.7 (16.9)	12.9 (12.7)	10.0
1970-71	6782	4566	7177	4960	1029	16.8	12.0	17.8 (17.8)	13.0 (13.0)	10.4
1978-79	24138	18401	12304	9278	2244	24.7	20.0	22.6 (24.8)	22.6 (20.1)	13.7
1979-80	24698	18000	11024	7927	2219	23.0	17.8	21.2 (23.5)	16.2 (18.4)	11.7
1980-81	29375	21272	12277	8930	2488	23.0	17.8	22.1 (24.7)	17.2 (19.6)	12.4
1981-82	32568	23651	12468	8934	2267	22.7	17.2	21.3 (24.4)	16.2 (19.1)	12.1
1982-83	37368	25895	12652	8934	1875	22.6	16.9	20.8 (24.8)	15.7 (18.5)	12.4
1983-84	43082	29635	13132	9172	2113	22.2	16.4	20.1 (23.5)	14.9 (17.8)	11.5
1984-85	49090	33691	13846	9662	2267	22.9	16.9	20.4 (24.4)	15.1 (18.6)	11.7
1985-86	55431	37585	14477	10037	2237	22.8	16.7	20.0 (24.6)	14.8 (18.6)	11.6

Note: Figures in the brackets are percentage change over the previous year.

Source: same as before.

Table XIII
Share of Public and Private Sector in Savings and Capital Formation

Year	Gross Domestic Savings Public	Private	Public (Percent)	Gross Domestic Public (at 1970-71 Prices)	Capital Forma- tion Private	(Rs. Crores) Public (Percent)	Plan Outlay (Current Prices)
1970-71	1253	5530	18.5	2773	4571	37.3	
1978-79	4780	19358	19.8	5012	6642	43.0	
1979-80	4967	19731	20.1	5309	6092	46.6	
1980-81	4603	24772	15.7	5576	6644	45.6	15023
1981-82	7229	26229	21.6	6124	6397	48.9	18373
1982-83	7841	29527	21.0	6238	6583	48.7	21725
1983-84	6664	36419	15.5	6139	7467	45.1	25314
1984-85	6423	42667	13.1	6842	7389	48.1	30032
1985-86							32239**

* Unadjusted.

** Revised estimates Rs. 34579 crores, 1986-87 Rs. 39052 crores (Proposed),

Source: NAS, Jan. 1987, pp. 14-15, from : *Annual Plan 1986-87*, Planning Commission.

Table XIV
Trends in Domestic Savings (in percent terms)

SLNo.	Item	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
1.	Household Sector Savings as Percent of Total Domestic Savings	78.08	74.83	81.85	75.83	78.48	87.78	91.41
1.1	Financial Savings as Percent of household sector savings	46.34	45.15	48.20	52.29	60.42	54.76	59.74
1.1.1	Currency as percent of Financial Savings	22.26	22.00	19.40	10.52	16.55	19.43	16.19
1.1.2	Net deposits as percent of Financial Savings	41.18	27.13	36.21	31.93	35.24	31.11	32.37
1.1.3	Shares and debentures as percent of Financial Savings	2.63	3.52	3.91	4.47	6.41	7.05	8.25
1.2	Savings in Physical assets as percent of household sector savings	53.66	54.85	51.80	47.71	64.68	45.24	40.26
2.	Private Corporate Sector savings as percent of Total Domestic Savings.	3.08	6.37	5.81	4.57	4.19	3.40	3.70

(Contd.)

(Contd. Table XIV)

2.1	Joint Stock Companies savings as Percent of Private Corporate Sector Savings	78.31	89.36	86.23	82.33	79.65	75.20	77.87
3.	Public Sector Savings as percent of Domestic Savings	18.84	18.8	12.34	19.61	17.32	8.81	4.88
3.1	Administrative Departments Savings as Percent of Public Sector Savings	87.25	89.83	95.58	77.45	65.23	41.49	(-)29.36
3.2	Non-departmental enterprises Savings as percent of Public Sector Savings	12.75	10.16	4.42	22.55	34.67	56.51	129.36

Source:-

National Accounts Statistics, 1970-71-1984-85, January 1987.

Central Statistical Organisation, Department of Statistics, Ministry of Planning, Govt. of India.

Table XV
Composition of Saving in the oorm of Financial Assets (Provisional)

Year	Currency	Deposits	Insurance-	Provident Funds	Claims on Govt.	Shares and Debentures.
						(Percentage Share)
1970-71	17.96	44.59	11.49	21.72	3.08	1.15
1971-72	16.67	46.54	10.03	18.34	4.16	4.27
1972-73	18.85	41.28	9.68	16.13	4.60	3.55
1973-74	22.46	53.73	9.38	16.21	8.26	2.41
1974-75	0.91	43.45	10.16	23.11	7.16	4.93
1975-76	6.54	45.22	8.17	19.52	20.16	2.17
1976-77	16.97	51.84	6.96	17.16	11.83	1.86
1977-78	9.94	50.86	8.37	18.61	4.60	3.32
1978-79	15.83	49.48	7.06	16.53	2.24	3.33
1979-80	14.49	47.94	7.93	19.43	3.15	2.77
1980-81	14.51	46.57	8.09	18.45	6.63	1.94
1981-82	6.93	44.48	7.85	18.80	13.22	3.33
1982-83	13.36	49.44	8.29	19.17	8.45	3.40
1983-84	14.17	47.70	7.13	15.48	9.84	4.47
1984-85	12.43	46.70	6.74	14.42	12.67	5.84
1985-86	8.61		6.94	13.89	16.03	6.94

Source: Reserve Bank of India, *Report on Currency and Finance* (Various Issues)

Notes and References

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10. *Ibid* p. 14.
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12. The Economy : As Seen Through National Accounts Statistics. *EPW.*, July 18, 1987. p. 1158.
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2. Resource Crisis and Response: Lessons from Seventh Plan

PRANAB BANERJI

ABSTRACT

The paper examines the proximate causes underlying the resource crisis during the Seventh Plan and reviews some major fiscal and monetary policy measures undertaken to meet it. In the light of recent experience, it highlights the gross inadequacy of resource forecasting exercises of the Planning Commission. It shows that dis-savings by the government, operating through monetary expansion, is a major explanatory factor for nominal household financial savings. The fiscal operations of the government are examined to show the irrelevance of the administered price-borrowings-deficit controversy. Tight monetary policy and increased government borrowings, the major ingredients of current policy, are shown to be internally inconsistent and self-defeating.

The years 1985-86 to 1988-89 were marked by important developments in macro-economic policies with far reaching implications for the economy. These were also the first four years of the Seventh Plan. The brief period of four years was marked by paradoxes, sharp turns and even reversals in policies. The Long Term Fiscal Policy (LTFP) embodying the leading postulates of supply-side economics—a source of inspiration for conservative capitalist governments—went hand-in-hand with economic planning in India. While the LTFP constrained the revenue side and plan commitments bound the expenditure side, another dimension was added by the Chakravarty Committee¹ report which attempted to control deficits of the government. The situation demanded drastic solutions—desperate ones were attempted.² Enormous pressures were put on public enterprises in a bid to raise resources and the document on Administered Price Policy was an exercise in post-facto rationalisation of an ongoing trend. In a desperate bid to borrow more, the government increased the rates of interest but soon retraced a step as interest burdens mounted. Tax relief and raids, monetary targeting and burgeoning deficits, financial liberalization and enlarged captive market for government bonds marked the eventful years.

The Chakravarty Committee, the LTFP, the document on Administered Price Policy and other documents and committees grappled with the gigantic problem of resources. Undoubtedly the resource crisis is the fundamental problem facing planned development in India. To grow we need to invest. The total amount of investment required to achieve the targeted rates of growth for the period 1985-90 have been estimated in the Seventh Plan. It is beyond the scope of this paper, nor is it necessary, to examine the exercise done by the Planning Commission. What is relevant here is from where and how the targeted magnitudes for investment were to be mobilized. Our discussions will be in the backdrop of the Seventh Plan.

To grow at the average rate of 5 per cent annually the Plan estimated that a total investment of Rs.322,336 crore would be required during the plan period.³ The estimates were based on the level of prices prevailing in 1984-85. Of this aggregate investment, the public sector's planned investment was put at Rs.154,218 crore.⁴ The estimated figures for the private corporate sector and for the household sector were Rs. 54,236 crore and Rs. 113,912 crore respectively.⁵

The aggregate amount of investment can occur only if resources of equivalent magnitude are freed from consumption or if resources flow in from abroad. The plan estimated that Rs.302,366 crore would come from gross domestic savings and the balance, Rs 20,000 crore, would come from abroad.⁶ Sectorally, investment targets can be met by internal savings of the sector, by borrowings from other sectors and by capital inflows from abroad. Thus, there are two dimensions to the question of resources: (1) the adequacy of aggregate savings and net capital inflows to meet aggregate investment targets and (2) the adequacy of sectoral savings and possibilities and mechanisms of transfer of resources from one sector to another. This paper excludes issues related to the inflow of foreign capital. Aggregate domestic savings, sectoral savings and inter-sectoral transfer of savings are our primary concerns here.

Savings: At a very basic level, the resource crisis is the product of stagnant gross savings and declining net savings rates (See Appendix I). According to Seventh Plan estimates gross savings rate in the Indian economy should reach 24.3 per cent in the terminal year of the Plan. This would require that the marginal rate of savings--the ratio of

increase in savings to increments in income--should rise to 28.4 per cent.⁷ But this will not be achieved.

Gross savings rate in the Indian economy has remained almost static in the last ten years. The experience of the 1980s shows that the marginal rate of savings is about the same as the average rate. Both have hovered around 19 to 22 per cent.⁸ A sharp increase in the marginal rate of savings to over 28 per cent would have required serious examination of savings behaviour and a proper policy frame.⁹ Unfortunately, despite a number of empirical studies, our knowledge about the determinants of savings in the Indian economy remains inadequate from the angle of policy formulation. The poverty of theory is reflected in estimations and policy formulations.¹⁰ The Seventh Plan, for example, contains almost no discussion on developing a policy-frame for savings and its technical note (chapter on Financial Resources Sub-Model) merely contains predictions of household sector savings based on regression equations of dubious value.¹¹ The serious problem of stagnant savings rate will not disappear by ignoring it.

In the early years of planning in India the task of increasing the marginal rate of savings was viewed as being primarily the responsibility of the state. A high marginal rate of savings in the public sector was seen as a necessary condition for the fulfillment of investment targets. This idea continues even in the Seventh Plan. The public sector's marginal rate of savings has been put at the ambitious level of 41 per cent.¹² But the gap between planned and actual amounts is no where greater than in the case of public sector savings (See Appendix II).

The dismal inadequacy of public sector's savings is the main cause for the resource crisis we face today. The Seventh Plan estimates that in the terminal year of the plan public sector savings will be Rs.14,443 crore (at 1984-85 prices).¹³ But the actual gross savings of the public sector in 1984-85 was only Rs.6533 crore (New Series).¹⁴ This implies that, if the plan target is to be achieved, the public sector's savings should register over 120 per cent increase in five years. With national income increasing at the rate of 5 per cent and even allowing for reasonable increase in the public sector's share in national income, the required rate of over 17 per cent increase (compound rate) in public sector's savings could never be achieved. In fact, the gross public sector saving at current market prices (not 1984-85 prices) is

Rs.6193 crore in 1987-88 indicating a precipitous decline in savings.¹⁵

Clearly, targets of this type are set only because statistical bases of policy making are weak. In fact, the Seventh Plan estimates of public sector savings is the product of inaccurate statistics. As stated above, the actual amount of public sector savings was Rs.6,533 crore in 1984-85. But the Seventh Plan (in its Table 4.1) puts the figure at Rs.9,364 crore. Since the plan was published in October, 1985 actual figures were not available to the planners for conducting the exercise on resources. Therefore, not only were the terminal years figures estimated (as they should be) but even the base year's figures had little factual basis. The magnitude of error in even the base year's estimate is, however, difficult to comprehend. The projection exercises of the Planning Commission require urgent scrutiny.

Moreover, projections were not always based on statistical methods (whatever be their validity). Sometimes it is difficult to know what, if any, was the scientific basis of certain projections.¹⁶ The Plan document, for example, estimates the savings of public enterprises after taking into account the "effects of action to improve productivity and efficiency as well as adjustments in prices."¹⁷ The 'Technical Note on the Seventh Plan' has of course no exercise of the type mentioned above. Again, it is assumed that "all of the additional resources mobilized by public enterprises would go to augment the resources for investment."¹⁸ From this statement we do not know whether the effects of additional resource mobilization by some public sector undertakings on the savings of other such undertakings were examined or not. Judging by the estimates of contribution of public enterprises in the Plan, the benefit of doubt cannot be given to the Planning Commission. The need for a thorough re-examination of the resources aspects of planning cannot be over emphasized. Table I indicates the enormous divergence between resource estimates of the Seventh Plan and latest estimates based on actual positions.

Transfer of Savings

The divergence between the estimates and the actual amount of savings, aggregate and sectoral, is one aspect of the problem. As is well known it is the catch all "household sector" which has emerged as the principal saver in the Indian economy. The question of resources is therefore also a problem of the transfer of resources from the house

hold sector to the private corporate and the public sectors.

Official statistics define savings of the household sector as gross physical capital formation in the sector *plus* additions to net financial assets held by it. The value of physical assets created in the household sector is clearly not transferred as investible resources to the other two sectors. It is only additions to financial assets (adjusted for changes in financial liabilities) which is available to other sectors for investment. A brief examination of trends and composition of financial savings of the household sector is therefore essential in evaluating the potential for transfer of savings.

But it must be emphasized that the problem of transfer of savings is of secondary importance. It has assumed a critical status mainly because of large shortfalls in public sector savings. The Seventh Plan estimated that Rs. 102,253 crores needs to be transferred during the plan from the household sector to other sectors. With net financial savings being about Rs. 67,009 crores in the first three years (at current prices) of the Plan ¹⁹ the Planning Commission's estimate appears quite realistic. But the plan estimate was based on unrealistic assumptions of public sector savings. As actual savings in the public sector fell far below the planned level the need to borrow more from the household sector increased (See Appendix III for gaps between sectoral savings and investments). The entry of a number of public enterprises in the capital market in the last four years, an exercise which finds no mention in the Plan, is the result of this logic. It is in this context that financial savings of the household sector has assumed greater importance.

But the trend in financial savings of the household sector is not very encouraging. The Chakravarty Committee had noted that the share of financial savings in total household savings was about the same in 1983-84 as it was in the period 1961-66.²⁰ In 1987-88 it formed 8.3 percent of NDP at current prices.²¹ The Committee felt that this could be attributed to inflation and low rates of interest. Such a conclusion fitted well with its own recommendations of higher interest rates and stricter monetary growth to check inflation. But there is one dimension of the problem, important especially in the short-run, which was overlooked.

This is the compositional or definitional aspect of financial saving. About half of the gross financial saving of the household sector consists of

increase in holdings of currency and deposits. Growth of money supply is therefore closely linked to absolute increases in nominal savings in the form of financial assets. If the monetary authorities are successful in curbing the growth of money supply, and if the distribution of deposits and currency between the household and other sectors remain roughly unchanged, then financial savings in the household sector would increase at a slower rate.

Developments in the first four years of the plan seem to support this logic. Table II shows that monetary expansion was considerably controlled if measured in terms of broad money during 1985-86 and 1987-88. In both years M3, grew at about 16 per cent compared to nearly 19 per cent in other years. Savings of the household sector in the form of financial assets (net) increased by only 2.5 and 0.8 per cent in these years. With inflation rates of 5.7 and 7.6 per cent in these years, real financial savings fell considerably. This inter-relation between monetary policy and the pool of savings has assumed importance in the context of recent developments in policy.

Besides currency and deposits, financial savings of the household sector also consist of provident and pension funds, 'claims on government' and investments in corporate sector's shares and debentures. The first two reflect borrowings of the government and the third indicates resource mobilization by the private corporate sector and the public sector directly from the household sector. Together these three items accounted for about one third of gross financial savings of the household sector in the last few years.

It is in this context that we must view the recent developments in capital markets. If the household sector has less funds to invest in the securities market then the amount of resources that the corporate sector can mobilize for investment would be reduced. The stock-exchange may get into a slump due to inadequacy of resources even though the corporate sector may be confident of adequate returns on investment.

Table III shows the declining trend in resource mobilization by the private corporate sector in the capital market.²²

It is however possible that corporate investment may not be constrained by the supply of investible funds. Unwillingness to invest may

be the more important factor. But for the government sector unwillingness to invest even the planned amounts is a remoter possibility. Therefore, faced with a resource crisis, the first attempt of the government would be to raise resources from the household sector. In the context of the general resource crunch discussed, such efforts would necessitate the offer of more lucrative terms to the lenders. It is against this background of inter-relation between monetary growth, savings, interest-rates and investment commitments that we should examine the recent trends in fiscal and monetary policies.

FISCAL DEVELOPMENTS & POLICIES

Balance from Current Revenues

The slow growth of public sector savings is due to the fact that savings of the Central Government have fallen sharply in recent years. The gross savings of the Central Govt. was Rs. 313 crore in 1983-84, (-) Rs. 963 crore in 1984-85, (-) Rs. 1441 crore in 1985-86, (-) Rs. 2852 crore in 1986-87 and (-) Rs. 3951 crore in 1987-88 (RE).²³

Gross savings of the Central Government is defined as Balance from Current Revenue of the Government of India *plus* Depreciation Provisions and retained profits of departmental undertakings. Of these two components, the factor primarily responsible for the trend in dissavings is the rapidly expanding deficit in the revenue account of the Government of India. The Central Government's revenue account has shown deficits in every year since 1979-80 (See Appendix IV for details). The deficit has also increased every year. The revenue account deficit was Rs. 6049 crores in 1985-86. In 1986-87 it rose to Rs. 8212 crore. In the first two years of the Plan the revenue account deficit aggregated to Rs. 14,261 crore. The Seventh Plan had estimated that the Government of India's revenue account deficit during the entire Plan-period would total Rs. 12,011 crore. In just two years this estimate has been exceeded. The total revenue account deficit during the Seventh Plan would exceed Rs. 41,000 crores.²⁴

The main cause for the dangerously increasing trend in revenue deficit is that revenue account expenditures have been increasing at a faster rate than tax revenues. The trend in revenue account expenditures is a matter of concern. The three largest items of expenditure in

this account are interest payments, defence and subsidies. Of these, interest payments have been growing at the fastest rate. In 1974-75 interest payment were only half the amount spent on defence. Now interest payments are larger than defence expenditures. This is despite the fact that defence expenditure increased over five times since 1974-75.²⁵

Increase in interest payments, unlike increases in defence expenditures and subsidies, is the direct result of the government's own actions. It is the result of past borrowings and therefore an outcome of past budgetary policies. Though it is essential to curb the increase in interest payments, there is little effort in this direction. The response of the government in the face of mounting revenue deficits is grossly inadequate. "Recognizing the gravity of the expenditure problem", states the Economic Survey (1986-87), the government has initiated "a system of zero-base budgeting". It has also initiated "a system of quarterly budgeting...(and) a system of monetary targeting".²⁶ Clearly, 'the gravity of the expenditure problem' has not been recognized.

As noted earlier, increase in interest payments is the single most important factor behind the trend in current expenditures. But interest payments cannot be controlled by zero-base or quarterly budgeting. Moreover, the government itself is conscious of the limitations of zero-base budgeting under economic planning. The Economic Survey therefore stated that the government "is also evolving a system of commitment budgeting, which will be complementary to zero-base budgeting, the objective being that on-going projects should not be starved of funds."²⁷ Planned outlays too will not be amenable to change through zero-base budgeting. The effects on defence expenditures would be small and major subsidies can be reduced by political decisions alone and not by new techniques of budget-making. Further, with the implementation of pay revision, hike in interest rates on government securities and provident funds and increase in administered prices (which primarily affect costs in the capital account), the trend of rapidly rising expenditures will not be reversed in the near future.

In the face of rising expenditures, the government can increase tax revenues so that more resources are available for planned investment. Tax revenues of the Government of India (net of states' shares) has increased slowly in the 1980s from about 7 per cent of GDP to about 8.6

per cent. Current expenditures, on the other hand, have increased from 10 per cent of GDP in 1980-81 to 14.6 per cent in 1987-88.²⁸ Increase in tax earnings is essential but our tax efforts have been poor. The Seventh Plan document noted:

"In the earlier plan period, the automatic growth of tax revenues has been proportionate to, or slightly more than proportionate to, the growth in national income or GDP. But this did not happen during the Sixth Plan period. Every major tax declined as a percentage of GDP,

"It is also a matter of concern that direct taxes (excluding land revenue and the agricultural income tax) have steadily declined as a percentage of non-agricultural GDP at current factor cost over the last decade or so: it fell from 5.8 per cent of non-agricultural GDP in 1975-76 to as low as 4.2 per cent in 1983-84. Contrary to the expectation that with economic development the ratio of direct to indirect taxes would increase, as a result of poor performance of direct taxes the Government has been forced to rely increasingly on indirect taxes."²⁹

Since 1975-76 the maximum marginal rate of income tax has not increased. In fact it has been reduced slightly. Yet, contrary to the claims of Indian supply-side economists, income tax collections as a percentage of GDP fell sharply.³⁰ Clearly there has been increasing incidence of evasion which is not linked to tax rates. In the Indian context it is difficult to attribute the trends in tax earnings to inflation. In fact, basing itself on borrowed wisdom, with practically no empirical study to support it, the Long-Term Fiscal Policy adopted the position that the rates need to be pegged in the middle-run. With tax rates and base remaining roughly constant the need for revenues in face of rising expenditures necessitated tax collection efforts of unprecedented intensity. A developing country like ours cannot afford to have low income elasticity of direct taxes. Since the trend in tax revenues in the last decade cannot be explained by pure economic factors, determined enforcement of tax provisions is unavoidable and welcome. In fact they yielded substantial results with direct tax collections increasing sharply by about 20 per cent in three out of the first four years of the Seventh Plan.³¹ Yet, this was insufficient to meet the fiscal crisis.

Administered Prices

In the face of rising expenditures and inadequate increases in tax revenues the resource choices open to the government were visualized

as being between borrowings, deficit financing and increase in administered prices. Whereas the Chakravarty Committee advocated increase in borrowings as the desirable alternative to deficits, another document-Administered Price Policy-argued for a hike in administered prices.

The discussion paper on Administered Price Policy however posed the issue in a queer fashion. It noted that the public sector is expected to contribute 52 per cent of the Seventh Plan resources. Yet it discussed the issue of increase in administered prices almost entirely in the context of "when there is an increase in costs".³² It failed to see, or chose not to, that the real issue is not increase in administered prices following increase in costs. The real issue is the use of administered prices as means of resource mobilization.

Budgetary deficit, the supposed alternative to hike in administered prices, is primarily the result of negative balances in the revenue account (see figures in Appendix IV). In 1986-87 for example, the overall budgetary deficit was Rs.8261 crores whereas the revenue deficit was Rs.8212 crores, i.e., 99 per cent of the overall deficit. An attempt to reduce substantially this large deficit by increasing product-prices of the public sector would have been a naive venture. For, if the deficit was to be Rs.4000 crores, instead of Rs.8261crores, the non-tax revenues of the government should have been higher by as much as 52 per cent in 1986-87.³³ Since net contribution of public undertakings is only a small part of non-tax revenues (generally less than 10 per cent) the magnitude of increase in prices that would have any meaningful effect on deficits would have to be phenomenally high. Hike in administered prices is therefore only a distant substitute to deficit financing. In fact the overall deficit was kept in check by increased borrowings and slower growth of capital account expenditure during the plan (See Appendix V).

Borrowings

Borrowings, however, can substitute deficit financing only at increasing costs. With large deficits in the revenue account, expenditures to meet investment commitments (capital account) is possible only if both borrowings and deficits are large. There are limits upto which the government can borrow without undue monetary expansion.

The amount of loanable funds available in the economy, specially during periods of monetary controls, is limited. For instance, if bank deposits grow at 10 per cent, then banks' holdings of government securities would also grow at approximately the same rate if the Statutory Liquidity Ratio (SLR) remains unchanged. The growth rate of deposits therefore limits the extent to which the government can borrow from banks without increasing the SLR. An increase in the SLR, especially when deposits are growing at a slower rate, would lead to credit squeeze for the corporate and other sectors. The government can of course borrow (to some extent) from the public instead of from banks. But with financial savings of the household sector not expanding rapidly, increased borrowings from the public would be possible only if the rates of return on government bonds are increased. Developments in the last few years support this logic.

Net market borrowings by the centre and the state governments was Rs. 6475 crores in 1985-86 compared to Rs. 5425 crores in 1984-85.³⁴ Thus, net market borrowings by the government sector increased by 19.4 per cent. But aggregate deposits of scheduled commercial banks grew at 18.2 per cent during the year.³⁵ Increase in net market borrowings of the government sector, when deposits grew at slower rate, was made possible by increasing the SLR by one percentage point to 37 per cent and by strict implementation of SLR requirements. The same logic necessitated further increases in SLR to 37.5 per cent and then again to 38 per cent in 1988.³⁶

But this was not all. Following the recommendations of the Chakravarty Committee the interest rate on dated government bonds was increased by one per cent and the maximum maturity period was reduced by 10 years. The introduction of the system of auction of treasury bills sharply increased the rates of interest on these bills. A number of securities like the Indira Vikas Patras (a good-return 'small-savings' instrument with no questions asked) were issued. The public sector also entered the capital market with 10 per cent tax-free bonds whose actual returns to the tax-avoider was stated to be even 25 per cent. Expectedly, the private corporate sector complained against the issue of 'unfair' public-sector bonds which drained out resources from private sector securities. Events therefore showed that there are clear limits to which the government can borrow without major costs.

Deficits

The efforts by the government to raise resources from the public was the result of the Chakravarty Committee's recommendations. Thanks to a large captive market, the government can always reach its target of market borrowings. There is little divergence between budget estimates and actuals in the case of net market borrowings. But this is not the case with deficits.

Expenditures, tax-receipts and non-tax revenue receipts do not be have as planned. The effect of this naturally spills over to deficit figures. Therefore, despite large borrowings, the government may not succeed in controlling deficits. In 1986-87, for example the overall budgetary deficit was over 2.2 times larger than what was budgeted for. In fact the total deficit during the Seventh Plan would be about Rs.34291 crores-- compared to the Seventh Plan estimate of Rs.14,000crores.³⁷ In practice, therefore, there is little choice between borrowing and deficits. Also, as we saw earlier, hike in administered prices too will have little effect on deficits. Despite committees and documents, we have had large increases in all three.

MONETARY TRENDS AND POLICIES

Paradoxically, together with large budgetary deficits, the last four years were also marked by new attempts to control monetary expansion. In fact in 1986-87 the policy of targeting monetary growth was officially accepted and attempted.³⁸ With deficits running high these attempts yielded perverse results to the extent they were successful.

Strict adherence to the SLR was insisted upon by the RBI since 1985-86. The SLR was to be maintained on a daily basis and penal interest rates on refinance in the case of default was put at a high level. The SLR was also increased from 36 per cent to 38 per cent in four instalments since 1985. These measures, together with other developments like slow increases in net foreign exchange assets, had some effect on the growth of narrow money M1. But their effect on broad money was marginal. M3 grew at an average annual rate of 16.83 per cent during the period. M1, on the other hand, grew at 13.65 per cent annually.³⁹ (See Appendix VI).

To the extent the controls were successful in controlling monetary expansion they had some unintended effects. With growth rates of aggregate deposits showing only slight variation (excluding 1987-88) in

the last five years a higher and stricter level of SLR meant that resources flowing to the commercial sector would be reduced. Bank credit to the commercial sector which grew at 18 per cent in 1984-85 increased by only 13.8 per cent in 1986-87 and 13.3 per cent in 1987-88. The government's monetary policy, coupled with its budgetary operations, have undoubtedly contributed to the depression in the capital market and to the emergence of recessionary trends in the economy. However, bank credit to commercial sector grew at 17.8 per cent in 1988-89, slightly lower than the growth in aggregate deposits.⁴⁰ (See Appendix VII).

By the end of the year 1986-87 the effects of tight credit policies and increased government borrowings at higher interest rates began to tell on the economy and even on the government. Together with this came the realization that growth of money supply was set to exceed the targeted rate. So, as the year came to a close, important changes in policy began to take shape.

By the end of February 1987, the RBI raised the Cash Reserve Ratio (CRR) to 9.5 per cent in an effort to impound increases in liquidity. The CRR was further raised to 10, 10.5 and then to 11 per cent in a bid to control the growth of money supply.⁴¹ The CRR had remained unchanged for three years before 1987 though the first few years of decade saw frequent and steep hikes in the CRR from 6 per cent to 9 per cent. Further, the release of impounded cash balances of scheduled commercial banks were regulated with a view to control the growth of money. Also, on the very last day of the fiscal year 1986-87 the RBI and the government announced a set of policies which marked a reversal of a number of key measures which followed the Chakravarty Committee's recommendations. The highlights of this new policy package was a further increase in the SLR to 37.5 per cent and reduction in interest rates on fixed deposits. Interest rates on National Savings Certificates and on tax-free public sector bonds were also reduced. The maximum lending rates of scheduled commercial banks were lowered in a feeble attempt to ease the credit problems of the commercial sector.

The new set of policies made it clear that the government had decided to borrow more at lower interest rates from a captive market. Its fondness for the Chakravarty Committee's recommendations have faded. And this is not surprising. For the high interest rate policy

advocated by the Committee would have increased substantially the burden of the largest borrower in the country, the government. The Committee of course was aware of this but felt that increased borrowings from the public (if coupon rates are high) rather than from the banking system would reduce government deficits and thereby lower prices. But it did not examine in depth the implications of these commendations. It was in fact casual in suggesting that the "net impact of higher coupon rates) on the Government Budget need not be large in the long run to the extent that relative price stability is achieved".⁴² It did not draw the logical conclusions from its own findings.

Increasing interest burden and relatively stagnant tax revenues, we have seen, are the principal causes for negative revenue account balances. As long as these negative balances grow both borrowing and deficits would be necessary if Plan commitments are to be fulfilled. Increased interest burden would necessitate more borrowings and/or larger deficits. Prices in India have great downward rigidity so that even if money supply is reduced it is output rather than prices which would adjust. In other words, strict control over monetary expansion would depress the rate of growth of output. Further, since financial savings of the household sector have not been growing rapidly, and because monetary assets constitute the bulk of household financial savings, it is a strange policy to try to mobilize more household savings by increasing interest rates alone while at the same time seeking to control monetary expansion.

The relation between money-supply and prices is too involved an issue to be discussed here. But in the Indian context it would be rash to say that monetary expansion is the only cause for increase in prices. The direct and indirect contribution of administered prices in the inflationary process has not been negligible. Therefore, a policy intervention which sees inflation resulting only from monetary expansion would rely on price signals to control the wrong variable, M3. It may be true, as monetarists argue, that though inflation may be triggered off by any factor, its spread and validation requires monetary expansion. However, in an economy where administered prices have a significant role, monetary controls would not reduce prices but the level of economic activity. There are significant links between hike in administered prices and monetary expansion and the two sets of policies cannot act at cross-purposes. Monetarist solutions are not easily

applicable to an economy with a large domain under planning.

The enormity of the resource crisis and the complexity of inter relations between different macro-economic variables and policies in a mixed economy show that there are no easy solutions. Imitative theorizing and policy making have proved inadequate, if not harmful. The need for self-reliance is nowhere more urgent than in the sphere of theory and policy. The drift in policy-making and increasing ad-hocism in interventions that are now developing are the results of our inadequate response to an enormous challenge.

Table I
Financial Resources for Central Plan 1985-90
(Rs. Crores)

	Seventh Plan Estimates (at 1984-85 prices)	Current Estimates (at current prices)
(1)	(2)	(3)
1. Balance from Current Revenues (a & b)	(-)3,761	- 41,440(a)
(a) At 1984-85 rates of taxes	(-)12,011	
(b) Additional Resource Mobilisation through taxes non-tax revenues	8,250	
2. Contribution of Central Public Enterprises (a & b)	51,694	57,229(b)
(a) At 1984-85 rates	37,454	
(b) Additional Resource Mobilisation	14,240	
3. Net Market Borrowings	20,620	30,927(a)
4. Net Capital Inflow from Abroad	18,000	17,567(c)
5. Other Capital Receipts	28,486	60,794(a)
6. Deficit Financing	14,000	34,291(a)
7. Total Resources	129,039	159,368
8. Central Assistance for State Plan	(-) 29,737	(-) 49,085(a)
9. Aggregate Resources of Central Plan	99,302	117,283

Sources : Col. (2). Seventh Five Year Plan, Vol I, p. 60. Figures include Union Territories which is of negligible value. Col (3) All figures with (a) are estimated on the basis of year 1985-86 to 1987-88. Revised Estimates of 1988-89 and Budget Estimates of 1989-90. Taken from EPW April 15, 1989. (b) Is based on revised estimates of this head for 1989-90. These are taken from 'Budget at a Glance of relevant years. These figures may be overestimated. (c) Estimated on the basis of figures given by the RBI in its Annual Report on Currency & Finance 1987-88, Vol II pp. 106-107 for the first three years of the Plan. The annual average derived was multiplied by five to obtain estimates for the entire Plan Period.

Table II

Money Supply and Savings (percent per annum)

Years	Increase in M3	Variation in Financial Net Saving of Household sector.	Rate of inflation
1	2	3	4
1984-85	18.7	33.01	7.1
1985-86	16.1	2.84	5.7
1986-87	18.8	33.78	5.3
1987-88	15.7	0.78	7.6

Source : (a) Column (2) Economic and Political Weekly, May 13, 1989 pp. 1026-1027 (b) Column (3) Report on Currency and Finance 1987-88 Vol II, p. 15 (c) Column (4), *ibid*, p. 27.

Table III

Fresh Capital Issues by Non-Government Public Limited Companies

Year	Percentage Change over previous year
1985-86	71.7
1986-87	47.0
1987-88	(-) 31.2

Source : Calculated on the basis of data given in the Report on Currency and Finance 1987-88, Vol. I. p. 318.

APPENDIX I

Aggregate Savings at Current Prices

Years	Gross Savings (Rs. crores)	Net Savings (Rs. crores)	Rate of Gross Saving (Per cent)	Rate of Net Saving (Per cent)
1980-81	28,773	16,686	21.2	13.5
1981-82	33,668	19,209	21.1	13.3
1982-83	34,670	17,784	19.5	11.1
1983-84	41,023	21,701	19.8	11.5
1984-85	44,838	22,581	19.5	10.9
1985-86	57,630	31,190	22.0	13.3
1986-87	63,413	33,293	21.7	12.7
1987-88**	66,650	--	20.2	--

Source: CSO, *National Accounts Statistics* (New Series) May, 1988. pp. 4-5.

** GOI, *Economic Survey*, 1988-89, pp. S 8-S 11.

APPENDIX II

SECTORAL SAVING RATES

(Per cent of GDP at Current Market Prices)

Years	Household Sector	Private Corporate Sector	Public Sector
1980-81	16.1	1.7	3.4
1981-82	15.0	1.6	4.6
1982-83	13.5	1.6	4.4
1983-84	15.1	1.5	3.3
1984-85	15.1	1.7	2.8
1985-86	15.7	2.1	3.2
1986-87	17.2	1.7	2.7
1987-88	16.6	1.7	1.9

Source : GOI, *Economic Survey*, 1988-89, p. S. 10.

APPENDIX III

Gross Public Sector Savings and Fixed Capital Formation
(Rs. crores)

Years	Gross Public Sector Savings	Gross Public Sector Fixed Capital Formation	Col (2) as Percentage of Col (3)
(1)	(2)	(3)	(4)
1985-86	8592	27,537	31.20
1986-87	8018	32,992	24.30
1987-88	6193	34,319	18.05

N.B : For the Seventh Plan Gross Public Sector Savings as a percentage of Gross Public Sector Capital Formation was put at 37.23. Compare this with actuals in Col. 4.

Sources : GOI, *Economic Survey*, 1988-89, pp. S8-S9

APPENDIX IV

DEFICITS OF GOVERNMENT OF INDIA
(Rs. Crores)

Years	Revenue Account Deficit	Overall Deficit
1980-81	2473	2477
1981-82	777	1391
1982-83	1705	1655
1983-84	2865	1416
1984-85	4698	3745
1985-86	6849	4937
1986-87	8212	8261
1987-88	9137	5816
1988-89(RE)	11,030	7940
1989-90(BE)	7812	7337

Source : *Economic and Political Weekly*, April 15, p. 837.

APPENDIX V

Borrowings and Capital Expenditures

Years	Borrowings (Rs. crores)	Percent Increase Over Previous Year	Capital Account Expenditure (Rs. Crores)	Percent Increase Over Previous Year
1984-85	9,578		14,010	15.17
1985-86	9,966	4.05	16,135	15.17
1986-87	13,052	30.97	19,013	17.84
1987-88	15,861	21.52	18,705	(-) 1.63
1988-89(RE)	17,269	8.87	21,618	15.57
1989-90(BE)	18,702	8.30	22,519	4.17

N.B. Borrowing here have been defined as :
 Net Market Borrowings + Net External Borrowings + Small Savings
 (Centre's Share)
 * Net Provident Fund + Special Deposits.

Source : *Economic & Political Weekly*, April 15, 1989.

APPENDIX VI

GROWTH IN MONEY SUPPLY
(Percent increase over previous year)

Years	MI	M3
1984-85	19.2	18.7
1985-86	10.0	16.1
1986-87	17.4	18.8
1987-88	12.9	15.7
1988-89	14.3	16.7

Source : *Economic and Political Weekly*, May 13, 1989 p. 1026.

APPENDIX VII

SELECTED MONETARY INDICATORS
(Percent increase over previous year)

Years	Aggregate Deposit's	Bank Credit to Commercial Credit Sector	Net Bank Credit to Govt.
1984-85		18.0	20.8
1985-86	12.31	15.6	19.6
1986-87	31.32	13.8	21.8
1987-88	- 9.37	13.3	18.0
1988-89	31.26	17.8	15.1

* Demand and Time Deposits (excludes 'other deposits of R.B.I.

Source : *Economic and Political Weekly*, May 13, 1989.

Notes and References

1. Report of the Committee to Review the Working of the Monetary System, RBI, 1985 chaired by Prof. Sukhamoy Chakravarty.
2. The 1989-90 budget, for instance, transferrer draws from the Oil Prices Stabilization Fund from the capital to the current account in a bid to make the revenue account deficit look less alarming.
3. *Seventh Plan*, Vol I, p. 32
4. *Ibid.*
5. *Ibid.*, p. 48
6. *Ibid.*
7. *Ibid.*, p. 47.
8. *National Accounts Statistics, New Series*, 1980-81 to 1985-86 CSO, May 1988, p. 4
9. The Seventh Plan, however, was conscious of the difficulty but underplayed it: "It would not be realistic to assume a significant rise in the savings rate in the short run. However, given that the value of estimated marginal savings rate is only of the order of 28.4 per cent, there is scope for raising it though appropriate policy and institutional changes." (p. 47).
10. In India Lewis, view that the savings rate depends on the expansion of the "Capitalist" sector (in Lewis' sense) has had a significant influence. Savings behaviour has been therefore studied in aggregate in relation to the terms of trade between agriculture and industry. But has Lewis' capitalist sector emerged as net saver and to what extent is it attributable to the terms of trade?
11. *A Technical Note on the Seventh Plan*, pp.31-32. The equations used to estimate the growth of currency and bank deposits held by the public—two major components of household financial savings—have GDP at factor cost: at constant prices and the GDP at factor cost deflator as the main explanatory variables. Interest rates, high powered money, government deficits, the currency—deposit ratio or the cash reserve ratio find no place in the estimates. Thus savings are made to depend entirely on income aggregates. Therefore, to the policymaker's question, 'How can we obtain the amount of saving to grow at the rate of 5 per cent?' The Planning Commission replies 'Grow at 5 per cent.'
12. *Seventh Plan*, Vol. I, p.46.
13. *Ibid.*, p.47.
14. *Economic Survey, 1988-89*, p.S-8. the Economic Survey of 1986-87 gives a figure of Rs.6423 crores (p.S-3) which would be the provisional estimate in the old series.
15. *Economic Survey, 1988-89*, p.S-8.
16. The Seventh Plan frankly admits: "In estimating the total resources availability for plan investment, while conscious effort to raise the volume of savings through additional resource mobilization effort on the part of the public sector is postulated, private sector savings have been estimated on the basis of past data (p.47). Therefore, the public sector saving estimates have no empirical basis.
17. *Seventh Plan*, Vol.I.p.46.
18. *Ibid.*
19. *Report on Currency and Finance*, 1987-88 Vol.II, p.15.
20. *Report of the Committee to Review the Working of the Monetary System*, p.43. Financial saving as a proportion of household saving was about 56 per cent in 1961-66 in 1985-86 it was 56.9 per cent and in 1987-88 it was 60.2 per cent (Report on Currency and Finance, 1987-88, Vol.I. p.10).

21. *Report on Currency and Finance*, 1987-88, Vol.II, p.15.
22. As a percentage of NDP at current prices gross saving of the household sector in the form of shares and debentures' was 0.5 percent in 1985-86, 0.4 in 1986-87 and 0.2 in 1987-88. (Ibid).
23. *Economic Survey*, 1988-89, p.78.
24. The revenue account deficit figures are taken from the *Economic and Political Weekly*, April 15, 1989, special statistics, pp. 837-840. Seventh Plan estimates are from Vol. I, pp.52-53.
25. 1988-89 (RE), interest payments amounted to Rs.14,150 crores compared to Rs.13,200 crores spent on defence. In 1974-75 the figures were Rs. 1,001 crores and Rs.2,112 crores respectively. The figures of defence expenditure however include expenditure on capital account.
26. *Economic Survey*, 1986-87 pp.59-60.
27. *Ibid*, p.74.
28. *Economic Survey*, 1981-89, p.70.
29. *Seventh Plan*, Vol. I, p.57.
30. The maximum marginal rate of personal income tax was 77 per cent in 1975-76 and 66 per cent in 1980-81. Income Taxes as proportion of non-agricultural GDP were 3.15 and 2.11 in the same years.
31. Based on data published in *Economic & Political Weekly*, op.cit.
32. *Administered Price Policy*, Min. of Finance. The quote is from p.31. Section III- Policy Issues, follows this line of argument.
33. Based on Special Statistics, *EPW* op.cit. non-tax revenues the same year Rs.8143 crores.
34. *Economic Survey*, 1987-88, p.5-36.
35. *EPW*, May 13, 1989 pp.1026-1027.
36. The SLR was raised twice in 1985-86, on June 8 and July 6 from 36 to 36.5 and then to 37 per cent. The SLR was raised to 37.5 per cent on April 25 and further to 38 per cent from January 2, in the year 1987-88. In 1987-88 as in 1985-86, aggregate deposits of scheduled commercial banks grew at a slower rate (14.9 per cent) than growth in net market borrowings (24.4 per cent) by the government.
37. Calculated on the basis of data given in *EPW*. special statistics Plan estimates from Vol. I, p.52.
38. *Economic Survey*, 1986-87 p.60.
39. Data on monetary variables in this section are taken from the *Economic and Political Weekly*, May 13, 1989, pp.1025-1027.
40. Net Bank Credit to Govt. increased by 23.5, 17.1 and 17.7 percents in years 1986-87 to 1988-89. (Ibid).
41. The CRR was raised to 9.5 per cent in March, 1987, then to 10 percent in October 24, 1987. It became 10.5 and then 11 per cent in July 1988. Clearly monetary control is becoming more difficult.
42. Chakravarty Committee Report, op. cit., p.156. The logic given is interesting: Higher coupon rates would enable more borrowings from the public which would lower the monetisation of public debt and retard the growth in money supply. This would dampen a rise in prices which would lead to 'saving in government expenditures, A new macro-economics of a mixed economy in a paragraph!

3. The External Sector of the Indian Economy

Aasha Kapur Mehta

Given the size of India's economy and given the objectives of self reliance and import substitution, the external sector has played a very limited role in the economic development of the country. Our share of world exports declined gradually from 1.94 per cent in 1950 to 0.64 per cent in 1970 and 0.42 per cent in 1980. Our contribution to world exports remained negligible at less than half of 1 per cent through the eighties. At the same time, we imported 1.84 per cent of world imports in 1950, 0.65 per cent in 1970, and 0.64 per cent in 1987. Clearly therefore, at the aggregate level, India is neither a major buyer nor a major seller on the international market.

Again, at the aggregate level, the ratio of exports to GDP at factor cost has fluctuated between 4.7 and 6 per cent while that of imports varied from 7.7 to 10.5 per cent throughout this decade. This clearly signifies our limited dependence on the world market. Despite this, considerable attention has been focussed on the external sector, for this has been the source of several problems for the economy.

Imports have exceeded exports throughout the decade; the deficit on balance of trade has been almost equal to the value of exports in some years; the size of counteracting flows on the current account is declining; the depreciating rupee hasn't helped either on the trade front or on the debt front, and, the burden of external debt and debt service are mounting. What follows, is an attempt at briefly studying each of these in turn. The report is divided into three sections. Section I looks at the current account of the Balance of Payments and its constituent categories; section II analyses the relationship between changes in the exchange rate and trade flows while section III looks at India's external trade.

It needs to be pointed out, however, that several problems face the researcher venturing into the study of the external sector of the economy. Firstly, intertemporal comparisons are rendered difficult because the value of traded output changes with fluctuations in the rate of inflation as well as with variations in the rate of exchange. Given a floating exchange rate regime, the rupee may be appreciating against some currencies and depreciating against others. Secondly, variations exist between data available from different government sources. For example, comparing the data for 1985-86 published in the 1987-88 Economic Survey and Report on Currency and Finance the numbers are Rs. 11,578 and Rs.11,012 crores, respectively, for export; Rs.21,153.6 and Rs.19,766 crores for import; and a deficit of Rs.9,586 and Rs.8,754 crores on trade balance. Similarly in 1986-87, exports were Rs.13,315 crores according to the July, 1988 RBI Bulletin and Rs.12,550 crores in the November, 1988 Monthly Report. Data discrepancies exist even between the RBI Bulletin and the Report on Currency and Finance--both RBI publications. This clearly makes analysis extremely difficult, for results depend on the source of estimates used.

Thirdly, data on the external sector is available after substantial delay. For example, the latest Economic Survey and Report on Currency and Finance have Provisional trade data for 1986-87 and 1987-88 and the November 1988 RBI Bulletin upto 1987-88. The November, 1988 Monthly Economic Report published by the Ministry of Finance has provisional data for 1986-87 and 1987-88 only for exports, imports and the trade balance.

Fourthly, data available from international sources is generally published for the calendar year while that from Indian sources is for the financial year. Comparison of data between foreign and domestic sources is therefore not possible.

Finally, of course, there is the question of accuracy of available data, for a substantial fraction of foreign trade occurs outside the purview of official channels.

I. EXTERNAL TRADE

Seventh Plan Projections

The Seventh Plan projected a growth in the volume of exports at the

rate of 7 per cent annually during 1985-90. Export growth was expected to depend primarily on engineering goods, chemicals, readymade garments and gems and jewellery. The document pointed out that "even in the longer run, export growth would have to rely on manufacturers... For, unlike agricultural commodities, output growth of manufactures is not constrained by the availability of land, while shortages of raw materials and other inputs can be overcome through recourse to imports. For another, market penetration becomes easier because of their exceedingly small share at present in the world trade in manufactures."¹

Imports were projected to increase at an annual rate of 5.8%. Import demand for petroleum, oil and lubricants and metals, was expected to grow rapidly as was import of fertiliser and fertiliser inputs. However, imports of steel, cement, synthetic fibres, newsprint and nonferrous metals were expected to decline with the progress of import substitution. No foodgrain imports were envisaged, though a margin of contingency was built into the overall import forecast to take care of drought, trends in growth of world trade and worsening of terms of trade.

Net invisible earnings were expected to offset less than half of the deficit on merchandise account. The deficit on current account was expected to be Rs.20,000 crores over the period 1985-90.

Mid-Term Appraisal

The mid-term appraisal of the Seventh Five Year Plan states that the need for careful management of balance of payments during the second half of the 1980s had been clearly foreseen. Exports fell short of targets in 1980-85; only limited expansion of domestic crude oil production was possible in 1985-90; and debt service obligations were slated to rise sharply. However, the appraisal admits that, in effect, the balance of payments position was worse than had been initially projected. Exports fared poorly until 1986-87. The report states that "the performance of Indian exports generally depends on the expansion of world economy and trade, domestic demand and output growth, factors which manifest themselves in varying degrees over time and across products."² The report goes on to add that imports appreciably exceeded the expected levels during the first two years of the plan, their volume rising on average by 9.3%, as compared to the

5.8% that had been forecast. However the data provided on balance of payments are non comparable with other sources because they are (i) net of crude and product exports, and (ii) at 1984-85 prices and exchange rates.

External Trade: Actuals

The current account of the Balance of Payments consists primarily of two categories of transactions - trade in merchandise and trade in invisibles. Invisibles include transfer payments and services such as travel, transportation, insurance and investment income.

After four years of surplus, India had a Rs. 235 crores deficit on current account in 1979-80. The deficit increased seven-fold to Rs.1,657 crores in 1980-81 and subsequently fluctuated between Rs.2,262 and 2,852 crores until 1984-85. 1985-86 saw a doubling of the current account deficit to Rs.5,927 crores (See table I). Partially revised RBI estimates place the gap at Rs.5,830 crores in 1986-87.³ Business Standard reports and 8% growth in the current account deficit to Rs.6,293 crores in 1987-88.⁴

In the late seventies, we had a current account surplus/deficit of roughly Rs.200 crores because the surplus on net invisibles was approximately equivalent to the deficit on merchandise account, both veering around Rs.2,000 crores in 1978-79 and Rs.3,000 crores in 1979-80. The merchandise trade deficit increased substantially (by 77%) to about Rs.6,000 crores in 1980-81 and again (by 43%) to about Rs.9,600 crores in 1985-86. The estimated deficit for 1986-87 was marginally lower at Rs.9,354 crores. The surplus on net invisibles, however, fluctuated around Rs.3,800 crores. As a result the extent to which the surplus on net invisibles was able to offset the deficit on merchandise trade declined from 72% in 1980-81 to 38% in 1986-87. Hence the widening current account deficit (See figure-1).

The Seventh Five Year Plan estimated that "on the whole net invisible earnings are expected to offset somewhat less than half of the deficit on merchandise account."⁵ The actual position during the first two years of the Seventh Plan reflects invisibles as counteracting 38% of the merchandise trade deficit. Similarly, the deficit on current account during the first two years of the seventh plan was Rs.11,440 crores - i.e. more than half the Rs.20,000 crores envisaged for the entire plan.

Data published in the Economic Survey (See table II) shows that until 1978-79, the trade gap was essentially a few hundred crore rupees. As a result of the oil price hike in the late seventies, the trade gap deteriorated sharply in 1979-80 to Rs.2,725 crores and again in 1980-81 to -Rs.5,838 crores. Interestingly, both exports and imports registered a growth rate of 145% between 1979-80 and 1987-88. However, imports grew from Rs.9,143 crores to Rs.22,399 crores while exports rose from Rs.6,418 crores to Rs.15,741 crores over the same period, resulting in a widening of the deficit from -Rs.2,725 crores to -Rs.6,658 crores.

If the deficit on the balance of trade is to be bridged, action on two fronts is critical. On the one hand, we need to export roughly around Rs.25,000 crores worth of goods for which a growth rate of about 60 per cent is required. On the other hand, we need to curtail import growth to about 10 per cent.

In 1986-87, 28 per cent of our export earnings were from agricultural products and 63 per cent from manufactured goods. Handicrafts, textile fabrics and leather and its readymades constituted the largest earners of foreign exchange. (See table III). Handicrafts consist primarily of gems and jewellery. While gems and jewellery exports increased from Rs.1,237 crores in 1984-85 to Rs.2,074 crores in 1986-87, and Rs.2,614 crores in 1987-88, pearl and semi precious stone imports required for their manufacture also increased from Rs.1,032 crores to Rs.1496 crores and Rs.1,994 crores correspondingly. (See table IV). Although gems and jewellery are the largest individual earner of foreign exchange in gross terms net earnings were Rs.205 crores in 1984-85, Rs.578 crores in 1986-87 and Rs.719 crores in 1987-88. Export of minerals and fuels has declined appreciably since domestic refining capability has increased. Earnings from export of several agricultural products registered a decline due to the impact of drought.

Imports consist primarily of petroleum, oil and lubricants (POL), capital goods (primarily non electrical machinery), pearls and stones (which are re-exported after adding value to them), iron and steel, fertilisers, chemical elements and compounds and edible oils. In 1987-88, capital goods accounted for 28 per cent of imports with imports under this head having increased from Rs.1910 crores in 1980-81 to Rs.6285 crores in 1987-88. (See table IV). The massive increase in

imports of capital goods has resulted from a combination of factors related to import liberalisation. On the one hand, liberalisation made it possible to import machinery required by firms for modernisation. On the other hand, the fear of restrictions on imports in the future has resulted in preponement of future demand, thus increasing the import bill.

Since capital goods constitute critical inputs in output produced for domestic use as well as for export, it is important that import of technologically superior capital goods not produced domestically be allowed when required for production of non-luxury products.

The other large item of import is Petroleum oil and lubricants which constitute 18 per cent of imports. The POL import bill had declined from Rs.5,267 crores in 1980-81 to Rs.2,797 crores in 1986-87. The import bill on this account, however, increased to Rs. 4,083 crores in 1987-88 (i.e. by 46 per cent) due to the increase in unit price as well as import volume. We need to curtail POL imports and simultaneously need to become more energy efficient.

Receipts on account of transfer payments (primarily private remittances) have been in the region of Rs.3,500 crores over the last few years, while outflow on this account has been negligible. In 1986-87, net transfer payments were Rs.3,504 crores. (See table I).

Service exports grew substantially, registering a rise of Rs. 800 crores between 1984-85 and 1986-87, while service imports varied marginally. In net terms, over this period, the deficit on balance of services declined appreciably from about Rs.800 crores to about Rs.90 crores. The two large items under this head are travel and investment income. Net investment income was positive in the late seventies and until 1980-81, after which payments on this account have increasingly exceeded earnings. From a deficit of Rs.283 crores in 1982-83, net payment of investment income now stands at Rs.1,250 crores. The Economic Survey simply states that payments under investment income have continued to rise on account of past external borrowings.⁶ No explanation is given regarding the composition of these payments. The increased payment of investment income is due to larger interest payments for servicing the higher public and private external debt.

Net receipts on account of travel tourism and insurance were around

Rs.1,100 crores at the start of the decade, decreased to Rs.219 crores by 1984-85, recovered somewhat in 1985-86 and were Rs.1,158 crores in 1986-87.

In the aggregate, therefore, the net current account depends on the balance on merchandise, balance on services and transfer payments. Prospects of further increases in the size of net transfer payments are bleak. The deficit on services has decreased but the two major flows--travel and investment income--are moving in opposite directions. Payments on investment income (which are primarily interest payments) need to be reduced for a surplus balance of services. The main driving force, however, is the merchandise account. Unless exports can balance imports, we will continue creating additional (much less solving inherited) balance of payments problems.

II. THE EXCHANGE RATE - BALANCE OF TRADE - EXPORT COMPETITIVENESS LINKAGE

The Indian Exchange Rate Regime

With effect from September 25, 1975, India adopted a new exchange rate regime which falls into the broad category of a managed floating system. The exchange value of the rupee is determined with reference to the daily exchange rate movements of a selected number of currencies of the countries that are India's major trading partners. The selection of the currency units and the weights assigned to them are determined by the RBI with the approval of the government. In order to discourage speculation in the foreign exchange markets, the actual composition of the basket is not disclosed. Initially the rupee value of the basket of currencies was maintained within a band of 2.25 on either side of the base value of Rs.18.3084 adopted at the time the multi-currency basket was introduced. After January 1979, however, the relationship of the rupee to the basket of currencies has been maintained within a wider band of + 5 per cent. The pound sterling is the intervention currency.

The Exchange Rate of the Rupee

Exchange rates for spot and forward purchases of the pound, dollar, yen and mark are announced daily by the RBI on the basis of international trends in these currencies. With continuous fluctuation

of these currencies vis-a-vis each other, frequent adjustments in the exchange rate of the rupee become necessary. Most of these adjustments in the value of the rupee have been in one direction--downwards.

The rupee depreciated 15.75 per cent against the SDR in 1986, 12.14 per cent in 1987 and 11.05 per cent up to December 5, 1988. (See table V) With regard to the four major currencies, during 1987 and 1988 respectively, the rupee depreciated 19.5 per cent and 11.6 per cent vis-a-vis the pound sterling, 16.1 per cent and 4.6 per cent relative to the mark and 20.7 per cent and 13.1 per cent against 100 yen. However, the rupee appreciated 2.1 per cent relative to the US dollar in 1987 and depreciated 14.8 per cent in 1988. (See table VI)

Depreciation, Exports, Imports and the Balance of Trade - India's Major Trade Partners

Foreign demand for Indian goods and Indian demand for foreign goods are a function of several factors, only one of which is the rate of exchange. When the rate of exchange changes under flexible exchange rates, this is referred to as currency depreciation or appreciation. A currency depreciates when, given floating exchange rates, it becomes less expensive in terms of a foreign currency. Devaluation, on the other hand occurs in a fixed exchange rate regime when the price of the domestic currency (in terms of foreign currencies) is decreased by official action. There is, however, no substantive difference between depreciation and devaluation.

It is true that depreciation/devaluation of the rupee will make Indian goods cheaper in terms of foreign currencies and foreign goods more expensive in terms of the rupee. However, this neither necessarily nor automatically gets translated into growth in exports, decrease in imports and improvement in the balance of trade. Hence depreciation/devaluation, *ceteris paribus*, is no solution to problems of foreign exchange shortages. What follows is an attempt at substantiating this on the basis of data pertaining to the period 1981-82 to 1986-87.

India's aggregate exports increased from Rs.7,806 in 1981-82 to Rs.12,452 crores in 1986-87 (i.e. by Rs.4,646 crores). Meanwhile, imports increased from Rs.13,608 crores to Rs.20,201 crores and the balance of trade deficit worsened from Rs.5,802 crores to Rs.7,749

crores. Over this period, the rupee depreciated 29.8 per cent against the US dollar, 10.33 per cent against the pound sterling, 38.7 per cent against the DM and 51 per cent against the yen. Approximately 40.7 per cent of our total exports in 1986-87 were to and 40.2 per cent imports from four countries--the US, UK, FRG and Japan. The corresponding shares for 1981-82, were 34.7 per cent and 29.9 per cent. Although we had a surplus on our balance of trade with the US, over this six-year period our deficit with FRG doubled, with UK more than doubled and with Japan increased six-fold--rupee depreciation notwithstanding. An attempt has therefore been made to analyse the relationship between the rupee and each of these four currencies on the one hand and changes in exports, imports and the trade balance with these countries on the other.

The Rupee-Dollar Exchange Rate and Trade with the US

1984-85 seems to mark a turning point in India's trade with the US, with a trade surplus emerging after years of deficit. 11.8 per cent of our exports were to the US in 1981-82, as against 18.8 per cent in 1986-87. Imports from the US, however, remained roughly 10 per cent of our total imports. Despite continued depreciation in the value of the rupee relative to the dollar (though at varying rates), imports from the US increased over this period with the exception of 1984-85 (when depreciation reached a peak of 13 per cent in one year) and 1986-87. Exports, however, grew rapidly regardless of the rate at which the rupee depreciated. A 7 per cent depreciation of the rupee in 1982-83 resulted in a marginal growth in exports from Rs.920 crores to Rs.928 crores. However, a 6.6 per cent depreciation of the rupee the following year, resulted in a 50 per cent increase in exports to the US, bringing the share of exports to this country to 14.3 per cent. In 1984-85, the rupee depreciated 13.3 per cent against the dollar, while the rate of growth of exports to the US halved to 26 per cent and the share of exports to the US increased marginally to 15 per cent. (This, despite the fact that in 1984, aggregate US imports increased by 27 per cent and the proportion of US imports in world imports increased from 14.4 per cent in 1983 to 17.3 per cent in 1984). The rupee depreciated 2.8 per cent and 4.16 per cent against the dollar in 1985-86 and 1986-87 respectively--the lowest rates of depreciation since 1981-82. The share of exports to the U.S. in total exports, however, reached a high of 18.1 per cent and 18.8 per cent (See table VII).

The Rupee--Mark Exchange Rate and Trade with FRG

The rupee depreciated 38.7 per cent against the DM over the period under consideration. While one DM exchanged for Rs.3.86 in 1981-82, the rate of exchange was Rs.6.3 in 1986-87. Despite this, the balance of trade deficit doubled from Rs.596.6 in 1981-82 to Rs.1196.3 in 1986-87. No distinct relationship emerges between exports, imports and the value of the rupee relative to the DM. The rupee appreciated 0.5 per cent against the mark in 1983-84. Concomitantly exports increased 10 per cent and imports 35 per cent (as per 'theory', exports should have declined). The previous year, however, a 2.6 per cent depreciation of the rupee relative to the mark had been accompanied by a decline in both exports and imports. In 1984-85 the rupee depreciated 1.2 per cent against the mark, exports to FRG rose 30 per cent and imports increased (did not decrease) 15 per cent. However, a 12.5 per cent depreciation the following year elicited only a 5 per cent export growth and a 20 per cent import growth (not decline). In 1986-87, the rupee depreciated 27.7 per cent, exports grew 44 per cent and imports also grew 25.5 per cent. Result--by 1986-87, the deficit on balance of trade account had doubled despite a 40 per cent decline in the value of the rupee relative to the mark. (See table VIII).

The Rupee-Yen Exchange Rate and Trade with Japan

During the six-year period under consideration, our trade deficit with Japan increased six-fold even though the rupee depreciated over 50 per cent against the yen. The share of exports to Japan remained roughly 9 or 10 per cent while that of imports increased from 6.5 per cent to 12.7 per cent. Looking at the data for each of the years individually, we find that the rupee depreciated against the yen over the entire period with the exception of 1982-83. Exports to Japan increased in all years except 1983-84 and imports from Japan increased continuously except for 1984-85. No relationship emerges between rates of change in currency value, exports and imports. Other factors are clearly critical in explaining variations in trade. For instance, exports to Japan increased in 1982-83 -- a year in which the rupee appreciated against the yen. On the other hand, imports grew annually regardless of changes in the value of the rupee with the sole exception of a decline in 1984-85. (See table IX).

The Rupee-Pound Exchange Rate and Trade with UK

The rupee appreciated relative to the pound during the first half of the eighties, depreciating thereafter. Excluding 1984-85, imports from UK showed a rising trend regardless of the direction of change in the value of the rupee. The same was true of exports, with the exception of a decline in 1985-86 (concomitant with a decrease in the value of the rupee). The deficit on balance of trade, however, more than doubled from Rs.396.7 crores to Rs.885.9 crores. (See table X)

Depreciation, Export Competitiveness and Import Curtailment

Clearly, therefore, balance of trade problems cannot be solved merely by tinkering with exchange rates, for this will neither result in export competitiveness nor lead to import curtailment. Export competitiveness is not determined solely by price competitiveness. Further, the exchange rate forms only one component of the price at which a product is sold abroad.

The products constituting a major share of India's exports include handicrafts, textile fabrics, machinery, tea and leather products. It is critical that both producers and government appreciate the factors determining the competitiveness of these products in foreign markets. A case in point is machinery. India used to be competitive in certain types of machinery but now finds it hard to compete with South Korean and Taiwanese equivalents, despite the depreciating rupee. While demand for any machine in any country is a function of price, quality, service support, uptime, delivery schedules, engineering skills, technological capability of the supplier as well as brand recognition, the driving forces determining international competitiveness differ between different types of machines. For some kinds of machinery a proven track record, quality and reputation are critical, while price is not so important. Although demand for simpler varieties of machinery is price sensitive, familiarity with brand name and ability to provide after sales service are also critical.

In the case of tea, on the other hand, price is important, but so is quality, packaging, a marketing network, brand name recognition and ability to meet delivery schedules. With regard to textile fabrics, readymades and leather products, exports depend on design, fashion, customer consciousness and, in addition, price.

Further, price competitiveness is a function of relative input costs, production costs, marketing costs, government interventions, economies of scale and also exchange rates. Attempts at export promotion cannot, therefore, limit their focus to the rate of exchange.

On the import front, the bulk of our imports consists of crude oil, petroleum products, fertiliser, capital goods, iron and steel, etc. Demand for these is inelastic. A reduction in the value of the rupee simply increases the cost of these imports. A reduction in the value of the rupee is, therefore, not likely to act as a deterrent to import demand. Also, to the extent that imports constitute inputs into output produced for export, our export competitiveness is negatively affected.

In brief, therefore, an exchange rate depreciation makes the rupee and therefore Indian products, less expensive in terms of foreign currencies. By analogy, it also makes imports more expensive in terms of the rupee. If our exports and imports were price elastic the balance of trade gap would have narrowed in response to the depreciating rupee. The evidence, however, is to the contrary. This is to be expected since our import demand is inelastic and foreign demand for our exports is a function of several factors other than price. The net result has been a widening balance of trade gap and an increasing debt burden.

What is needed, then, is a micro or product level analysis to understand the factors determining the competitiveness of individual products in major foreign markets. Weights need to be attached to these factors and subsequent action taken to remove unnecessary irritants to exports. In the absence of this, mere tinkering with the exchange rate is not likely to yield results.

III. EXTERNAL DEBT

The Economic Survey, 1988-89 states that at the beginning of the current year, India's stock of disbursed and outstanding medium and long term external debt was estimated at around Rs.55,000 crores on government account, non-government account, IMF and external commercial borrowings. The level of debt service (including interest and amortisation) on this debt during the current year is estimated to account for about 24 per cent of current receipts. Looking ahead the scope for external borrowing on commercial terms, to finance bal-

ance of payments deficits, has to be calibrated keeping in view the rate of growth in foreign exchange earnings from exports of goods and services.⁸

The data provided by the 1988-89 Economic Survey on India's external debt on government and non-government account places the former at Rs.36,578 crores and the latter at Rs.848 crores, adding up to a total of Rs.37,426 crores. This, however, excludes suppliers' credit, commercial borrowings and IMF credits. The result is lack of clarity on the debt front and existence of gaps in available data.

The Economic Times reports that "India is close to becoming Asia's largest debtor with its medium and long term external debt running at about Rs.76,000 crores or over \$50 billion at the end of the current fiscal year.

If short term liabilities are included, the country's total outstanding external liabilities will easily exceed Rs.82,000 crores and place it fourth among the league of debt ridden countries headed by Brazil, Mexico and Argentina."

The report goes on to state that "with the depreciation of the rupee, Rs.55,000 crores of outstanding medium and long-term debt in March, 1988 gets upvalued to Rs.64,180 crores at the end of March, 1989".⁹ Commercial borrowings (Rs.3,000 crores) and net external assistance (Rs.2,600 crores) have also been received during 1988-89.

Total external debt can be defined as the sum of public long term debt, private non-guaranteed long term debt, short term debt and the use of IMF credit. Long term debt, in turn, is defined as debt that has an original or extended maturity of more than one year and that is owed to non-residents and repayable in foreign currency, goods or services.

World Bank estimates place India's total external debt at \$ 19,250 million in 1980 and \$ 46,370 million in 1987 and \$ 49,500 million in March, 1989 (See table XI). India's stock of external debt, therefore, increased 2.4 times over a seven-year period. The composition of debt changed substantially over this period. In 1980, 93 per cent of total external debt was long term, 4.8 per cent short term and 1.7 per cent constituted IMF credit. Dependence on IMF credit increased to 14 per cent in 1983, declining gradually to around 8 per cent in 1987. Short term debt constituted around 5 per cent of external debt over the

entire period.

Further, in 1980, 88 per cent of external debt consisted of loans procured from governments and their agencies on a bilateral basis or from international organisations on a multi-lateral basis. Official long term loans increased 81 per cent over the period under consideration. Despite this, by 1987, long term official loans comprised only 66 per cent of debt, due to the sharp decrease in share of bilateral loans from 53 per cent in 1980 to 30 per cent in 1987. Multi-lateral long term debt remained roughly 35 per cent over the entire period.

What exactly does all this mean? Our total external debt was \$ 46,370 million in 1987. Of this \$ 40,767 million comprised long term debt, \$ 1,950 million short term debt and \$ 3,653 million use of IMF credit. In order to service long term debt alone, \$ 4,197 million was paid towards interest and amortisation in 1987 compared with \$ 1,181 million in 1980. Approximately two third of the debt service burden was towards repayment of the loan and the rest towards interest.

Between 1980 and 1987 debt service as a percentage of exports deteriorated from 7 per cent to 17 per cent; the ratio of external debt to exports increased from 128 per cent to 238 per cent; and the percentage of reserves to total external debt fell from 62 per cent to 25 per cent.

Foreign exchange reserves at Rs. 6,605 crores are at their lowest in the last five years, i.e. since 1984-85. The reserve position peaked in 1986-87 at Rs. 7,645.2 crores. The setback in reserves is partly due to repayment of IMF borrowings, which under the extended fund facility would "touch a peak of 800 million SDRs during 1988-89. In addition, India had to pay back loans under trust fund drawings. Thus the total repayments to IMF during 1988-89 alone amounted to more than Rs. 1700 crore, with its inevitable impact on exchange reserves."¹⁰

Further, import cover provided by foreign exchange reserves dropped to 2.9 months--the lowest since 1975-76.

With foreign exchange reserves declining and the volume of debt and debt service burden growing rapidly, it is critical that we generate a surplus on the balance of trade. However, that is an end that is nowhere in sight.

Table I

The Current Account of the Balance of Payments (In Rs. Crores)

Year	Net Exports	Net Travel, Transport & Insurance	Net Investment Income	Net Transfer Payments	Net Current Account
1976-77	316.2	332.9	-125.7	955.2	1525.8
1977-78	- 107.5	554.4	-95.3	1292.4	1734.7
1978-79	-1842.6	543.6	8.4	1338.6	172.5
1979-80	-3374.4	912.3	264.2	1963.0	-234.5
1980-81	-5967.5	1096.9	483.9	2695.2	-1656.6
1981-82	-6121.0	849.6	339.1	2514.4	-2317.3
1982-83	-5776.1	643.9	-282.6	2796.7	-2296.4
1983-84	-5870.8	596.8	-543.8	3029.7	-2262.4
1984-85	-6721.1	219.4	-996.1	3541.0	-2852.4
1985-86	-9586.0	1157.6	-1249.5	3504.1	-5927.3
1986-87	-9353.9	1157.6	-1249.5	3504.1	-5830.0

Source : RBI Bulletin (Various issues)

Table II
India's Imports and Exports (in Rs. crores)

Year	Imports	Exports
1979-80	9143	6418
1980-81	12549	6711
1981-82	13608	7806
1982-83	14293	8803
1983-84	15832	9771
1984-85	17134	11744
1985-86	19658	10895
1986-87	20201	12452
1987-88	22399	15741

Source : *Economic Survey* (Various issues)

Table III
Principal Exports

(Value in Rs. crores)

Commodities	1984-85	1985-86	1986-87	1987-88
Agricultural Products	2696.5	3018.3	3422.0	N.A.
Of which :				
1. Coffee	210.2	264.9	296.7	263.2
2. Tea and Mate	766.6	626.3	576.8	592.4
3. Oil cakes	136.9	134.0	189.8	173.3
4. Tobacco	178.3	169.6	185.3	134.6
5. Cashew Kernels	179.7	225.1	327.6	306.7
6. Spices	206.7	277.8	279.0	309.3
7. Sugar and molasses	35.2	15.8	1.4	0.8
8. Raw cotton	59.7	68.2	204.7	95.5
9. Rice	169.2	196.3	197.3	324.6
10. Fish and it's preparation	381.4	409.0	539.0	525.1
11. Meat and it's preparation	82.5	73.8	75.5	85.5
12. Fruits and vegetables	137.6	124.0	155.8	150.8
13. Miscellaneous Foods	76.8	82.4	75.5	65.9
Ores and Minerals	637.6	784.7	717.2	703.3
Of which :				
14. Mica	19.6	20.9	19.6	23.2
15. Iron ore	459.4	578.8	546.6	542.8
Manufactured Goods	6210.1	6374.2	7808.4	N.A.
Of which :				
16. Textile Fabrics	1717.5	1795.1	2178.8	3088.8
(i) Cotton yarn and fabrics	620.4	573.7	637.2	1063.8
(ii) Readymade garments	953.3	1067.0	1330.5	1792.1
17. Coir yarn manufactures	27.9	33.7	33.5	29.4
18. Jute Manufactures	341.3	261.8	244.0	242.8
19. Leather and it's manufactures	724.1	769.9	922.4	1148.5
20. Handicrafts	1750.8	1881.4	2547.6	3253.5
Of which Gems and Jewellery	1237.1	1502.7	2074.3	2613.5
21. Chemicals & allied products	482.9	497.5	583.2	823.4
22. Machinery & Transport	880.3	897.9		
23. Iron and Steel	75.8	56.2	1132.7	1433.0
Minerals and fuels	1822.9	654.9	417.6	656.5
Others	76.6	62.5	87.1	N.A.
Total :	11743.7	10894.6	12452.4	15741.2

Source : *Economic Survey, 1988-89.*

Table IV
Principal Imports (Value in Rs. crores)

Commodities		1984-85	1985-86	1986-87	1987-88
I.	Food and live animals for food	694.8	853.2	N.A.	N.A.
	Of which :				
	Cereals and its preparations	242.0	110.2	47.0	32.7
II.	Raw materials and intermediate manufacturers	12859.8	13966.1	N.A.	N.A.
	(a) Cashew nuts	38.8	24.4	65.6	63.5
	(b) Crude rubber	87.2	100.6	80.7	107.8
	(c) Fibres	233.9	259.4	N.A.	N.A.
	Of which:				
	(i) Synthetic & Regenerated Fibres	60.3	68.6	44.1	28.4
	(ii) Raw wool	71.1	97.5	55.9	79.2
	(iii) Raw cotton	0.0	12.6	0.1	N.A.
	(iv) Raw jute	31.8	6.0	1.7	N.A.
	(d) Petroleum oil & lubricants	5409.1	4989.4	2796.7	4082.7
	(e) Animal & Vegetable oils & Fats	1007.8	770.1	N.A.	N.A.
	Of which :				
	Edible oils	921.1	734.7	612.0	920.0
	(f) Fertilisers & chemicals Products	2770.6	3255.8	N.A.	N.A.
	Of which:				
	(i) Fertilisers & its materials	1346.1	1435.8	733.5	486.2
	(ii) Chemical element and compounds	856.7	1089.4	1035.6	1050.5
	(iii) Dyeing, Tanning material	41.5	56.4	72.6	79.9
	(iv) Medical & Pharmaceuticals	137.1	177.2	158.0	137.1
	(v) Plastic material & artificial resins	222.8	322.0	435.9	548.4
	(g) Pulp and waste paper	176.2	245.5	208.4	228.0
	(h) Paper, it's board & manufactures	195.5	226.0	194.8	258.1
	(i) Non-metallic mineral manufactures	1114.3	1201.4	N.A.	N.A.
	Of which:				
	Pearls, precious stones etc.	1032.1	1099.7	1495.5	1994.2
	(j) Iron and steel	941.1	1397.6	1449.7	1273.2
	(k) Non-ferrous metals	411.7	541.8	414.9	576.1
III.	Capital goods	3167.8	4285.4	5467.3	6284.9
	(a) Manufactures of metals	140.8	201.5	199.1	177.4
	(b) Non-electrical Machinery & appliances	1927.7	2592.7	3713.9	2888.0
	(c) Electrical machinery & appliances	730.4	922.5	877.5	1115.2
	(d) Transport equipment	368.9	568.7	676.8	740.9
IV.	Others	375.8	552.5	N.A.	N.A.
Total :-		17134.2	19657.7	20200.7	22399.0

Source : *Economic Survey, 1988-89.*

Table V

Month-wise Movements in SDR-Rupee Exchange Rate During 1988 Compared with Those Last Year (1987) and the Year Before (1986).

At the end of	SDR-Rupee Exchange Rate (1SDR x Rs.)		
	1986	1987	1988
December (of the previous Year) or			
At the beginning of the year	13,363	16,051	18,268
January	13,727	16,534	17,944
February	14,045	16,536	17,801
March	13,986	16,621	17,970
April	14,459	16,512	18,252
May	14,619	16,537	18,385
June	14,758	16,530	18,493
July	15,183	16,623	18,570
August	15,185	16,903	18,539
September	15,398	16,764	18,795
October	15,471	17,309	19,962
November	15,842	17,665	20,454
December	16,051	18,268	20,538 ^{1A}

*Relates to Dec. 5, 1988 the latest available.

Source : (1) International Financial Statistics (Various Issues)
(2) IMF Survey, Vol. 17 No. 23 (Dated Dec. 12, 1988) also by the IMF

During (Period)	Depreciation of the Rupee vis-a-vis the SDR (in per cent)		
Jan. - Mar.	4.45	3.43	(-) 1.66
Apr. - June	5.24	(-) 0.55	2.83
July - Sep.	4.16	1.40	1.61
Oct. - Dec.	4.07	8.23	8.49 ^{1A}
Jan. - June	9.45	2.90	1.22
July - Dec.	8.06	9.51	9.96 ^{1A}
Jan. - Dec.	15.75	12.14	
So far in 1988 (upto Dec. 5)			11.05
Corresponding Period last year (1987)			9.49
Cumulative Depreciation over the three years: 1986, 1987 and 1988 (Jan. 1986 to Dec. 1988)			34.94 ^{1A}

^{1A} Upto Dec. 5, 1988.

Note : A 'minus' sign indicates the appreciation of the Rupee (vis-a-vis) the SDR (of course, in per cent) during the period.

Table VI

Month-wise Movements in RBI's Spot Exchange Rates for the Four Major Foreign Currencies - 1987 and 1988 Erosion in the External Value of the Rupee During 1987 and 1988

At the end of	RBI's Spot Middle Rate for Pound Sterling (1 \$ = Rs.)		RBI's Spot Buying Rate, Rupees per unit of Foreign Currency (Unless otherwise indicated)					
			US Dollar		Deutsche Mark		100 Yens	
	1987	1988	1987	1988	1987	1988	1987	1988
December (of the previous year)	19.25	23.90	13.0890	12.8205	6.7431	8.0386	8.2372	10.3842
January	19.95	23.25	12.9366	13.0208	7.2674	7.8125	8.5179	10.2459
February	20.20	23.15	13.0208	13.0208	7.1378	7.7160	8.5106	10.1523
March	20.75	24.35	12.8700	12.9534	7.1429	7.7942	8.8028	10.3520
April	21.05	24.85	12.6263	13.2275	7.0572	7.9239	9.0580	10.6175
May	20.90	24.85	12.8041	13.4228	7.0373	7.7882	8.9047	10.7296
June	20.70	24.10	12.9032	14.1094	7.0423	7.7280	8.7873	10.6045
July	20.90	24.45	13.0719	14.1303	7.0472	7.5586	8.7489	10.6383
August	21.25	24.20	13.0039	14.3082	7.1633	7.6511	9.1491	10.5932
September	21.35	24.55	13.0890	14.5497	7.1174	7.7280	8.9286	10.8108
October	22.45	26.40	13.0548	14.8622	7.5301	8.3963	9.4162	11.8483
November	23.55	27.65	12.9032	14.9399	7.8431	8.6133	9.7276	12.2549
December	23.90	27.05	12.8205	15.0432	8.0386	8.4246	10.3842	11.9474
During Jan. - Dec.	19.5	11.6	(-) 2.1	14.8	16.1	4.6	20.7	13.1

Depreciation of the Rupee vis-a-vis the Foreign Currency

(Contd.)

Continued to Table VI

Cumulative depreciation over the two years: 1987 & 1988	28.8	13.0	20.1	31.1
Cumulative Depreciation over the three years: 1986, 1987 and 1988 (Jan. 1986 to Dec. 1988)				34.94 ^{1A}

^{1A} Upto Dec. 5, 1988.

Note : A 'minus' sign indicates the appreciation of the Rupee (vis-a-vis) the SDR (of course, in per cent) during the period.

Table VII

India's Trade with the U.S. and Per cent Depreciation of the Rupee vis-a-vis the U.S. Dollar

Year	Exports to the US (Rs. crores)	Imports from the US (Rs. crores)	Exports to the US as a per cent of India's Exports	Imports from the US as a per cent of India's Imports	Depreciation of the Rupee w.r.t. the US dollar
1981-82	920.2	1419.7	11.8	10.4	-11.8
1982-83	928.3	1426.5	10.6	10.0	-7.16
1983-84	1395.6	1841.9	14.3	11.6	-6.57
1984-85	1765.8	1700.6	15.0	9.9	-13.03
1985-86	1973.8	2063.7	18.1	10.5	-2.85
1986-87	2359.3	1963.3	18.8	9.8	-4.16

Source : Calculations based on data published in *Economic Survey, 1987-88* and RBI Bulletin, 1988.

Table VIII

**India's Trade with FRG and Percentage Depreciation/Appreciation of the
Rupee vis-a-vis the Deutsche Mark (DM)**

Year	Exports to the FRG (Rs. crores)	Imports from FRG (Rs. crores)	Exports to FRG as a per cent of India's Exports	Imports from FRG as a per cent of India's Imports	Percentage Depreciation Appreciation of the Rupee w.r.t. the DM
1981-82	351.2	947.8	4.50	7.0	+8.5
1982-83	340.1	831.4	3.86	5.8	-2.55
1983-84	375.3	1122.9	3.84	7.1	+0.51
1984-85	487.9	1289.1	4.15	7.5	-1.18
1985-86	513.0	1543.7	4.70	7.8	-12.48
1986-87	740.3	1936.5	5.90	9.6	-27.65

Source : Calculations based on data published in *Economic Survey, 1987-88* and RBI Bulletin 1988.

Table IX
India's Trade with Japan and Per cent Depreciation/Appreciation of the
Rupee vis-a-vis the Yen

Year	Exports to Japan (Rs. crores)	Imports from Japan (Rs. crores)	Exports to Japan as a per cent of India's Exports	Imports from Japan as a per cent of India's Imports	Percentage Depreciation/ Appreciation of the Rupee w.r.t. Yen
1981-82	690.4	886.5	8.8	6.5	(-) 7.6
1982-83	833.6	1087.9	9.5	7.6	(+) 1.3
1983-84	825.7	1446.9	8.5	9.1	(-) 11.35
1984-85	1029.4	1240	8.8	7.2	(-) 10.21
1985-86	1164.4	1774	10.7	9.0	(-) 12.4
1986-87	143.6	2558	10.7	12.7	(-) 30.09

Source : Calculations based on data published in *Economic Survey, 1987-88*, and RBI Bulletin, 1988.

Table X

India's Trade with U.K. and Per cent Depreciation/Appreciation of the
Rupees vis-a-vis a Pound Sterling

Year	Aggregate Exports to U.K. (in Rs. crores)	Aggregate Imports from U.K. (in Rs. crores)	Exports to U.K. as a per cent age of Indian Exports	Imports from U.K. as a percentage of Indian Imports	Percentage Depreciation/ Appreciation of the Rupee w.r.t. the Pound Sterling
1981-82	420.1	816.8	5.4	6.0	+ 8.1
1982-83	421.8	912.6	4.79	6.4	+ 6.16
1983-84	556.1	1152.7	5.69	7.3	+ 4.84
1984-85	612.6	933.5	5.2	7.45	(+)3.7
1985-86	524.6	1250.6	4.8	6.4	(-)11.8
1986-87	737.1	1623.0	5.9	8.1	(-)11.78

Source : Calculations based on the data published in *Economic Survey, 1987-88*, and RBI Bulletin, 1988.

Table XI

India's External Debt (in US \$ million)

	1980	1981	1982	1983	1984	1985	1986	1987
Total External debt	19250	21106	25027	28796	31272	36625	41311	46370
1) Long term debt	17998	18938	20924	23073	25597	30819	34717	40767
2) Short term debt	926	1204	1827	1573	1743	1516	2303	1950
3) Use of IMF credit	327	964	2876	4150	3932	4290	4291	3653
Long Term debt								
i) Official	16986	17257	18399	19550	20029	23561	27164	30763
Multi lateral	6720	7801	9126	10354	10977	12932	14757	16975
Bilateral	10266	9456	9273	9196	9052	10629	12407	13788
ii) Private Creditors	675	808	1287	1756	2957	4165	4955	6562
Suppliers	151	120	88	91	237	411	435	435
Financial Markets	525	688	1198	1665	2720	3754	4519	6126
iii) Private Nonguaranteed	336	873	1239	1767	2611	3093	2598	3442

Source : World Bank Estimates.

Notes and References

1. *VIIth Five Year Plan* (1985-90), GOI, pp.63-4.
2. *Mid-term Appraisal, VIIth Five Year Plan*, GOI, p.15.
3. *RBI Bulletin*, January 1989, p.s-88.
4. *Business Standard*, 19th May 1989.
5. *VIIth Five Year Plan* (1985-90), GOI, p.66.
6. *Economic Survey 1987-88*, GOI, p.84.
7. This section has been published in the *Quarterly Economic Report*, IIPO, July-Dec., 1988.
8. *Economic Survey, 1988-89*, GOI, p.129.
9. *Economic Times*, 13th March 1989.
10. *Ibid*, 17th May 1989.

4. Industrial Development and Policy During the 1980s.

Kamal Nayan Kabra

The present exercise attempts to review various facets of the changes taking place in the industrial sector in India during the years of the 1980s. It has been attempted to obtain data on these questions from various official publications, financial newspapers and reports from various research institutions. However, far more detailed data which become available from the Annual survey of Industries have not been made use of owing to their non-availability for quite a few recent years.

To begin with, we provide a perspective on industrial growth as provided in the Seventh five Year Plan, both for the Plan period as also for the next 15 years. An analysis of the plan perspective on industrial change and policy provides the framework in which it may be possible to understand the changes taking place in the industrial sector during the 1980s. This is followed by a discussion on the changing share of industry in the national income of the country. Subsequently, an attempt to analyse the overall industrial growth and its composition has been made. This analysis provides, it is hoped, a number of insights into the functioning of the industrial sector, the problems and challenges it is facing and the directions in which it is moving. On this basis, the next section is devoted to a discussion of the problem of industrial sickness in the country. In the following section the small scale industrial sector is the subject of discussion. In the course of this discussion, the question of employment in the industrial sector is also touched upon. Naturally, these changes in the industrial sphere are related to the changes in the industrial policy which have been introduced in a fairly large measure during the recent years. This is what is being done in the last part of the exercise. It may, however, be clarified that the attempt to link up the industrial performance and industrial policy changes is bit too ambitious an exercise to be taken up presently. We have just taken up a few

question and related them to a few stylised facts as are readily available presently.

Perspective:

The sectoral growth pattern expected over the Seventh Plan may be taken to provide the framework in which the performance of Indian industry and of policy initiatives taken during the period may be appreciated. These projections are based on an overall rate of growth of 5 per cent with agricultural output growing at a rate of 4 per cent per annum, industrial output growing at an annual rate of 8.3 per cent: of electricity, gas and water supply at 12 per cent and of transport services at 8 per cent. On this basis, it is estimated that the composition of national income in the year 1989-90 would change fairly markedly. The Seventh Plan maintains that "Agricultural and related sectors are expected to contribute 33 per cent of GDP in 1989-90. While the share of mining, manufacturing, construction, electricity and transport will be 34.4 per cent. Thus by the end of Seventh Plan, the, contribution of the agricultural sector, the industrial sector and the services sector will, in terms of income generated, be of roughly equal proportions i.e. about one-third each". (pp. 25-26).

This change is of notable salience. Since the three broad sectors are expected to contribute roughly equal proportions to the total output, would one be correct to regard the sectoral composition of GDP balanced? Afterall, economic balance is more than mere arithmetic balance. From an economic angle, balanced composition of the GDP has to be, for one, in terms of inter-industry linkages, both on the supply and the demand sides. It has, moreover, to be balanced in terms of the occupational distribution of the workforce among the three broad sectors. In a dynamic situation, one may also consider sectoral composition of GDP balanced if it contributes either to the processes of growth with stability or equity or self-reliance or fuller utilisation of the labour force.

The development perspective extending up to the end of the current century embodied in the Seventh Plan attempts to evolve a specific framework with respect to industrial development as well. The starting point of this perspective seems to be the pursuit of "accelerated rate of growth of industry and its much greater relative contribution to national output and employment". (p. 9), (emphasis added) as it herelds "the

most important structural change". With this end in view, it is further maintained that "Annual industrial growth during the period 1985-2000 can be expected to average 8-9 per cent." (p.16)

The emphasis on industry, leading to an important structural change in the economy is based on the realisation that on the basis of industrial growth since the inception of planning, "a new phase of industrialisation has now commenced" which is based on "greater emphasis on technical progress and productive efficiency". (p.16) For this purpose, through reform of management system, increased domestic competition, qualitative change in state intervention, involving greater interaction with industry, re-orientation of small-industry policy, steady increase in the linkages within industry, departure from semi-insulation from international competition which is consistent with self-reliance and by forging closer links between industry, finance and trade faster industrial growth, reduction of cost and improvement in quality are to be attained. It has been reiterated that the "continuing process of industrial policy reforms" is "directed at fostering greater competition, efficiency and growth in the industrial sector." (*Economic survey, 1988-89*, p.43)

It is visualised that the manufacturing sector will, through these measures, undergo a qualitative change. "The contribution of manufacturing to the gross value added would go up from about 15 per cent in 1984-85 to around 20 per cent in 1999-2000." It is clear that while industry is expected to contribute about one-third to income generated, (value of output) it is expected to contribute about one-fifth to gross value-added. The implications of this divergence for competitiveness and self-reliance cannot be very helpful.

In the composition of manufacturing output there would be greater share of petrochemicals, plastics, fertilisers, aluminium, electronics, telecommunication equipment and computers. Five fold increase in the output of plastics, three-fold in fertilisers and aluminium and 25 times in that of electronics would clearly transform the manufacturing scene by the year 2000. Mass-consumption goods, export-oriented units and some 'sun-rise industries' like advanced machine tools, fibre optics and lasers, bio-technology and electronics have been singled out for keeping pace with developments abroad and opening new vistas for skilled manpower. As far as greater share of industry in the occupational structure is concerned, it is suggested that the industrial programme itself is intended to "create a substantial employment potential". (p.17)

The long-term industrial perspective elaborated in the Seventh Plan may be taken to provide the framework in which the performance of the industrial sector and the design and efficacy of modifications in industrial policy have to be viewed. It is not clear whether the increased relative share of industry in the GDP is derived from the postulation of higher rate of growth of industry or it is the other way round. The choice of specific industries picked up for substantial expansion seem to have been derived from their capacity to contribute to growth of output, value-added, international competition and standing. Other considerations influencing the choice of high-growth industries are: scope for cost reduction through high-tech and scale economies, need to employ skilled manpower and take industries to new areas.

Employment in Industries

There is little evidence that this kind of highly capital-intensive industries whose contribution, both direct and indirect, consists mainly towards meeting the demands of the higher income-groups can have an employment potential capable of increasing the relative share of industry in absorbing both the existing backlog of unemployed and the new entrants to the labour force. Assuming that advanced technology and scale economies lead to cost reduction and the benefits are passed on to the consumers, how much home market expansion can come about through price effects? Are these sufficient for relatively increased share of industry in employment which requires increased production of wage-goods or there is need for specific income generation schemes which expand the home market? Unless technology, product-mix, location of industries, etc., are changed in such a manner that there emerge additional employment opportunities in industry commensurate with the projected additions to labour force, there is little reason to expect a structural shift in the occupational structure would materialise by the year 2000 A.D. Even in its strategy of tackling the "problem of urban poverty", creation of industrial jobs does not find a mention, though the contribution of employment creation in general and raising productivity and earnings have been emphasized in this connection. (p.34).

The industrial perspective spelled out in the Seventh Plan does not seem to provide indication to this effect. One may, on the contrary, discern some trends unhelpful to employment generation because most of the fastgrowth industries like electronics, plastics, etc. are character-

ised by technology, scale, size of the market, etc. which do not have impressive employment prospects. The high growth industries do not include the producing wage - goods needed for sustaining the growth of productive employment under conditions of price stability. The "policy reorientation" is likely to contribute to the growth of "small-scale and village industries" (p.16) and "provide by the year 2000 plentiful mass consumption goods". These are perhaps the most important avenues visualised for fostering the growth of industrial employment. What seems problematic is that since industrial growth has made little impact on the employment situation, there is a need for new thrusts which make a dent in the un-employment situation.

In terms of the Seventh Plan formulation, employment growth in the secondary sector is likely to follow the pattern as indicated in Table 1.

When it comes to deal with the employment profile likely to emerge as a result of the programmes and policies adopted during the Seventh Plan, the planners seem to retrace from the earlier position regarding "accelerated growth of industry and its much greater *relative* contribution to national output and *employment*". (p.9 emphasis added). Evidently, realisation of this perspective would have required a higher volume of employment growth in the industrial sector than in the non-industrial sector. However, it is clearly recognised that as many as 7.484 million additional jobs (in terms of standard person years) are to be generated in the industrial sector (i.e. manufacturing, mining and quarrying and electricity generation). (p.33) As against this, agriculture and services are expected to contribute nearly 18 million and 12.7 million men years of jobs respectively. The absolute growth of industrial employment giving an annual average rate of growth of 4.32 per cent, would not be able to make a difference to the relative share of industry employment during the Seventh Plan period. Agriculture, particularly non-crop sector and the services sector are planned to remain the top contributors to organised sector employment. Thus, contrary to its own earlier stated position, the section on employment impact in the Seventh Five Year Plan goes on to recognise that "In essence the strategy is based on the premise that *even with a high rate of industrial growth*, the excess rural population cannot be fully absorbed in the organised industrial sector and additional employment has to be generated in rural areas through intensification of agriculture and villages and rural industries, diversification of rural economic activity and a large programme of construction and capital formation." (p.33). It means the structural

retrogression which has been in evidence in the Indian economy for quite some time, is likely to persist through the Seventh Plan. The Seventh Plan has visualised the creation, on an average, of over 13.35 lakh standard person years of employment in manufacturing, 68.2 thousand in mining and quarrying and 93.4 thousand in electricity generation. Though there is a considerable time-lag in the availability of employment data, it would be our attempt to compare the performance of industrial employment against these targets. To begin with we examine the record of growth of output. This is partly owing to far more regular data availability. But there is an additional factors. It seems our plans take largely one-dimensional view of industrialisation in terms of growth of output. Further, this is called for an account of the fact that industrial growth is planned mainly in terms of the output indicator, with industrial investment being planned and encouraged as the main instrumental variable for the purpose. Recent policy re-orientation was basically related either to fuller production based on present capacities or facilitation of freer capacity installation. The expected employment figures too are worked out mainly on the basis of the projected levels of output on the basis of employment elasticity of output. Thus the growth performance in terms of industrial output is crucial in many respects as the primary focus of industrial planning. It is evident that employment remains at best an indirect focus of industrial planning.

Relative Sectoral Shares

During the 1980's, there has been almost a steady increase in the contribution made by the industrial sector to India's GDP. Except for 1984-85 when the contribution of industries to GDP declined by a small amount of about 0.21 per cent points, it has steadily been rising, reaching the level of about 27.7 during 1986-87 as compared to about 24.3 during 1980-81. The decline in the share of industries in GDP during 1984-85, the last year of the Sixth Plan arose from a lower rate of growth (6.4 per cent) compared to 8.1 per cent in the preceding year. During 1987-88, the share of industry is likely to remain largely unchanged as industrial output increased at a lower rate of 7.5 per cent in comparison with the preceding year's growth rate of 9.1 per cent (News Series, 1980-81). However, taken together with the share of construction, electricity, gas and water, the share of secondary activities in GDP increased to 28.6 per cent during 1987-88. (See Table I).

It can be seen that the share of industry has improved *vis-a-vis*

agriculture. However, it is the service sector which managed to maintain its lead, as the largest sector in terms of income produced. The contribution of service sector to GDP remains around two-fifths of the total. The share of agriculture is likely to improve somewhat following an expected growth rate of around 17 to 20 per cent during 1988-89. Thus one may not expect a marked change in the sectoral contribution of industry to GDP during the penultimate year of the Seventh Plan. Taken together with the contribution of construction, transport, etc. to GDP, the share of industries is unlikely to climb up to one-third as envisaged in the perspective of the Seventh Plan.

Overall Industrial Growth and Its Composition

Viewed in the background of the shortfall of rate of growth of industries during the Sixth Plan (at 5.5 per cent) *vis-a-vis* the target rate of 7 per cent, the first three years of the Seventh Plan make good news : at 8.7 and 9.1 per cent, the first two years presented a better show, and during 1987-88, at 7.5 per cent, the shortfall is marginal. (Table II) Given negative growth rate in agriculture and allied activities during 1986-87 and 1987-88 (-1.6 per cent and -0.7 per cent respectively, according to the *Economic Survey, 1988-89*, p. 5-7), adverse effect on industrial growth may not be entirely unexpected. As the *Mid-Term Appraisal of the Seventh Five Year Plan* puts it, "A sluggish growth or fall in agricultural production affects the income and employment of a large section of the population, particularly those who are below the poverty line." (p.5) Infact, during the entire Seventh Plan period upto 1987-88, agriculture has done rather poorly, even during 1984-85 and 1985-86, it gave a growth rate of 0.5 per cent only in both the years against the average annual growth target of 2.5 per cent.

In this context the fact that the performance of industries as shown by the new series of index numbers of industrial production (base = 1980-81) has been better than the Seventh Plan targets deserves special attention. Compared to a fall in the rate of growth of industrial production from 9.1 per cent in 1986-87 to 7.5 per cent in 1987-88, during another recent drought in 1979-80 industrial production actually declined by 1.7 per cent. *SBI, Monthly Review, economic survey, 1987-88* maintains, "to the absence of other shocks" in addition to the one delivered by the drought. (p.2) But it is also claimed that this insulation of industry from the adverse spill-over effects of the drought is indicative of the growing diversification and resilience of the non-agricultural

sector and decline in the share of agriculture and agro-based industries in national income. The *Economic Survey* also posits that "impact of drought on industry appears with a lag of six to eight months." (p.4) It means the marginal slow-down in industrial production during 1987-88 may, to an extent, reflect the lagged effect of the drought. The *Report*, 1987-88, of the Department of Industrial Development, Ministry of Industry, also claims that "the Indian industry has achieved considerable resilience and has undergone structural transformation from a seller's market to buyer's market." (0.2) To the extent the effects of a drought tell on industry through a fall in demand, an industry facing a buyer's market (excess supply) or demand constraint is likely to be relatively more vulnerable to the effects of drought. The availability of demand becomes quite critical to both the utilisation of existing capacities and making additions to capacity. The fact that Indian industry did not have to curtail its output in the face of the drought which "would have seriously impeded the employment and poverty alleviation objectives of the Seventh Plan" (*Mid-Term Appraisal of the Seventh Five Year Plan*, p.5) may be taken to indicate that the demand cut arising from a drought did not affect Indian Industries. It can be seen from Table III that compared to 1986-87, industrial production during 1987-88 (the year of the drought) showed an improvement in the consumer goods sector from 7.1 per cent, to 7.4 per cent. In fact, the production of consumer non-durables, which may well be expected to be relatively more responsive to drought-induced decline in demand both on account of demand factor and supply of agricultural inputs, increased fairly impressively by 7.4 per cent during 1987-88, against the preceeding years 4.9 per cent. Somewhat inexplicable on the basis of the linkages emanating from the supply shock of drought and fall in income and employment has been the noticeable fall in the growth rate of consumer durables over the same years from 18.9 per cent to 7.6 per cent. It follows that one has to look for a different set of factors than drought to understand these facts.

As pointed out in the annual report of the Ministry of Industry, the performance of the industrial sector may well be indicative of a "structural transformation" away from goods which are sensitive to drought-induced reduction in income and employment, i.e., mass consumption goods or wage-goods of industrial origin. Is such a structural transformation of industries desirable? Does it divorce industrial growth from the processes of income generation, employ-

ment creation and wants-fulfilment of a large number of people dependent on agriculture? It appears that there might be such trends in the composition of industrial output. It has been pointed out that "the liberalised policy increased investments but did it in non-essential, luxury and fashion-dominated areas. On the other hand, those producing wage-goods or exports were stagnant." (*Malcom Adiseshiah, Mid-Year Review of the economy-1987-88*, p.89). Thus the industrial growth during the 1980s shows that disproportionality between agricultural and industrial growth is increasing, reminiscent of what was seen during the first 15 years of planning.

These issues regarding the disaggregated pattern of growth of industrial output would be taken up below after we have examined the growth performance of the three main sub-sectors, viz., manufacturing, mining and electricity generation.

Problems Arising from New Index Numbers

The decomposition of the rate of growth of industrial output into its major sub-sectors has to be seen in the light of the new index numbers of industrial production with 1980-81 as its base. There are some controversies regarding the weights assigned to and the number of items covered by the new index in so far as they tend to overstate the rate of growths because of the manner in which the small sector has been handled and the weight of some older sluggish industries reduced. Also the new index has brought about an enhancement without providing credible rationale, of the value-added per unit of physical output, particularly for the relatively faster growing industries. Inclusion of 96 new items and exclusion of almost an equal number underlines this. An important feature of the new index is that it increases the weight given to mining, quarrying and electricity and reduces that of manufacturing (from 81.08 to 77.11). In general, the higher rate of growth can partly be ascribed to the new index numbers whose scheme of weights reduce the comparability of the growth rate of the 1980s with those pertaining to the earlier period index of industrial production which had a different composition and scheme of weights.

Some Other Indicators of Industrial Growth

Another important indicator of trends in industrial growth could be the investment in the pipeline and new industrial units which are being

planned. These indicators of new industrial ventures have another advantage over the current production statistics. They indicate the long term trends and future prospects of industrial growth. In the present context when the Government is undertaking a number of steps "to reform the industrial policy regime" to facilitate capacity creation, it is important to see the investment response of the entrepreneurs to these policy initiatives which intend to grant a major role to market environment in governing industrial performance. We show some select indicators of industrial approvals in the Table 5. It shows that the number of industrial approvals has declined in 1987-88 over the preceding year by as much as over 25 per cent. These numbers also include registrations issued by Secretariat of Industrial Approvals (SIA) under the scheme of delicensing, as well as the cases approved under the scheme of minimum economic scales. If one compares the number of such approvals issued during April-November 1988 over the preceeding year, one again comes across a decline of a little less than 10 per cent. The same story is repeated with respect to industrial licensing and re-endorsement under the scheme of broad-banding. Foreign collaborations and DGTD registrations have also declined during 1987-88 compared to the preceeding year. However, during the period April-Nov., 1988 the number of foreign collaborations cleared by the FIB increased by about 15 per cent, though, DGTD registrations had a rather precipitate fall of over 37 per cent. Though, these data refer to a rather short period, they tend to suggest that the initial responses to various measures of liberalisation does not seem to persist, let alone gather strength. However, the capital - intensity and average amount of capital involved in each of these licenses/registrations/collaborations seem to have gone up, if judged in terms of approvals given for import of capital goods as also the approvals for the issue of equity capital through the stock exchange. Capital goods imports approvals have increased from Rs. 1125 crores to about Rs. 1800 crores during 1987-88. The capital issues approved by the Comptroller of Capital Issues for the non-Government companies amounted to Rs. 5408 crores during April-December, 1988. This represents an increase of about 33 per cent over the corresponding period of 1987.

These trends regarding the number of units planned and the amount of capital involved are significant indicators of the level of industrial investment during the period under reference. An indirect reflection of this tendency can also be seen in terms of the increase in the total

number of companies at the end of a given year. It is true that all the companies registered are not industrial companies. However, a significant proportion of these companies are industrial ones and hence this indicator, along with the paid up capital, can be taken to indicate spurt in industrial growth. The number of companies at the end of 1987-88 was in excess of 1.55 lakhs of which over 99 per cent were non-Government companies involving a paid up capital of Rs. 44124 crores. This represented a growth of over 12.5 per cent in numbers and over 21 per cent in paid up capital. It may be noted that according to available figures the number of companies has increased to over Rs. 1.64 crores by Aug. 1988. It may also not be out of place to mention that while Government companies account for only 0.7 per cent of the number of companies. They account for over 77 per cent of the paid up capital of all the companies.

Seen in conjunction with the trends in output, the performance of industries in terms of number of industrial units, paid up capital, industrial approvals, foreign collaboration, clearance of capital goods imports and loans from term-lending institution indicate that in absolute terms there is a considerable amount of industrial growth and it involves a very high degree of capital-intensity. The use-based industries growth performance (Table IV) showed that the capital and consumer durable goods share the better part of this growth. If foreign collaborations and capital goods imports are taken as proxies for the level of technology which is obtained from the developed countries, one may have fairly reasonable ground to believe that modern industrial growth is fairly sizeable and is making impressive but unsteady advance.

Compared to the trends seen during the period of 1976-77 to 1979-80, the growth experienced during the 1980s mark a break from the past performance. However, as we seen earlier, some part of the higher growth may be owing to the change in the scene of industrial production. We also see else where that these growth indicators show a very uneven and unsteady performance as between different industries. Then, one has to reckon with the high degree of mortality and morbidity rate which is reflected in a good measure in the figures of industrial sickness, both in terms of number of units and the amount of bank credit locked up as a result of it. It is a pity that the amount of industrial capital immobilised in these sick units and the consequent loss of output and employment, should not even be monitored and reported. Similarly, the

behaviour of the prices of industrial goods and employment in these organised industries as also the export performance of these units are also an essential part of an exercise which avoids the trap of identifying industrialisation with number of industrial units, amount of capital and growth rate of output. This is more particularly correct in the context of a late-industrialising country like India with an occupational structure which is unbalanced in favour of agriculture and services.

Sub-Sectoral Growth Rates

Keeping these trends and limitations in view, let us see how sub-sectoral growth rates fared over the Seventh Plan period. (Table III). The growth of mining and quarrying has been well below the plan target right upto April-July, 1988 except during 1986-87. During 1987-88, this sub-sector gave the poorest show at 3.6 per cent. It may be that relatively high growth of the preceding year at 6.2 per cent raised the base level and the tempo could not be kept up.

Electricity generation exceeded plan targets during 1985-86 and 1986-87 and increased at a marginally lower rate (7.6 per cent) during 1987-88 against the annual average target of 7.7 per cent. A similar performance was maintained during 1988-89. During the first quarter, electricity generation exceeded increased at over 10 per cent. The period July-September, 1988 was rather slack, with an average growth of less than 2 per cent. However during October-December, 1988, it had spurred to 9.9 per cent. Thus it appears that power supply did not seem to have constrained industrial production and maintained its contribution to industrial growth.

Even how the manufacturing sector constitutes the major component of the industrial sector, accounting for well-over three-fourths of the weight of the industrial sector. Though the target of 5.5 per cent annual average rate of its growth should have been revised upwards in view of the new index numbers of industrial production, the manufactured output has increased during the Seventh Plan period so far at a rate sufficiently higher than the original target rate. However, during 1987-88, growth decelerated from the preceding year's 9.3 per cent to 8.2 per cent. The pickup in the growth of industrial output (whatever its actual magnitude) has received favourable notice from many, particularly as an indication of departure from the slow-down which has persisted for a long time since the mid-1960s.

It may be pointed out that one has to be cautious in treating growth rates experienced in the short-run. Apart from the need to locate the factors which are suggestive of the substantiality and sustainability of such spurts in growth, one has also to make allowance for things like the base on which the growth rates are calculated. For instance, the manufacturing output increased at 15.6 per cent during January-June 1987 over the corresponding period in 1986 during which the growth rate was merely 7.8 per cent. It is well-known that many industries have continuous production process which makes short-run variations in growth rate artificial. On the other hand, a higher growth rate during a quarter or six-months or even an year may represent completion of the works in the pipe-line. Then, differences in capacity utilisation may explain some of these fluctuations in the growth of output. Given the current liberal import policy and prevalence of kit-culture, higher rate of growth of output may not be accompanied by commensurate increases in value-added. Thus for a fuller picture of the trends in the manufacturing production, one has to look at capacity utilisation, behaviour of growth in net value added disaggregated data and trends in investment.

Capacity Utilisation

A look at the data on capacity utilisation, as available in the *Report, 1987-88*, of the Department of Industrial Development, Government of India (See Table 6) both during 1986-87 and 1987-88, shows that out of 48 industries for which statistics is provided, there were large and wide-ranging underutilisation of capacities in almost all the industries which are highly capital-intensive, have a reasonable export potential and make use of imported machinery, equipment and raw materials. The only exceptions reporting production over and above the installed capacities are, power capacitors, sheet glass, vacuum flasks/refills, electric fans and fluorescent tubes. The rate of capacity utilisation is less than half in many cases and in some cases is found to be as low as 30 per cent. Important among such industries are : power cables, electric motors, auto tyres and tubes, steel pipes and tubes, explosives, many important chemicals, etc. Given these figures, the claim by the Industries Ministry that Indian industry is now facing a buyer's market situation, implies that excessive capacities have been created. How does one understand, in the light of such excess capacities, recent policy moves facilitating capacity installation and fixation of minimum scales of production?

Disaggregated Profile of Growth

Aggregate industrial growth data become a little more revealing and operationally relevant in terms of their disaggregation into groups and commodities. This information would indicate how balanced is the spread of growth over various industries. These data also highlight the regional and commodity-wise impact of industrial growth. Table IV shows the growth of industries grouped together on the basis of the use of industrial products. It can be seen that the performance of various groups of industries had varied a great deal over the 1980s making it difficult to perceive any well-defined pattern. Except for the year 1987-88, the consumer durables industries have been experiencing very high rates of growth, generally a two-digit rate of growth. The average annual growth rate for this group over the period 1981-82 to 1987-88 amounts to 14.7 per cent, which is nearly double the overall rate of industrial growth. Compared to this, consumer non-durables have fared poorly: with two years of negative growth, the average annual rate for this group comes to 4.7 per cent only, which is less than the overall growth rate as well. The basic goods industries too have not been performing well. Their growth rate has been steadily falling since 1984-85; during this period it exceeded the average overall growth rate of 7.6 per cent during three years only. The capital goods industries have shown a creditable performance with an average annual growth of nearly 10 per cent. It seems that after the initial shock of import liberalisation, it has graduated to a two-digit growth rate. Liberal imports, eased technical and financial collaborations, ease of entry following delicensing and streamlining of industrial approvals, liberal tax regime accelerated depreciation provisions, and removal of restrictions on capacity utilisation may have helped the growth of this sub-sector. Then, electrical machinery and appliances (with growth rates exceeding 35 per cent per annum), appear to have contributed a great deal to the high growth profile of this sub-sector. Machinery and machine tools have fared poorly with negative growth during 1987-88. The intermediate goods industries have grown moderately with average rate for the period 1981-82 to 1987-88 being 5.8 per cent. The manufacturing scene shows that fluctuations in growth are noticeable, as can be seen from the coefficients of variation in growth rates, particularly for consumer goods. (Table IV)

Disaggregated data show that food products, leather and fur produ-

cts, automobiles, chemicals and chemical products, etc. have done very well during this period. The electric machinery and appliances group, particularly electronics subsector has grown at double the planned rate of growth, as the *Economic Survey*, 1988-89 points out. Jute, beverages and tobacco, wood and wood products and cotton textiles have been having hard times; though textile products, perhaps mainly for exports, have done rather well. During 1988-89, the production of textile products increased by 55.6 per cent. During this year, cotton textiles and leather products showed negative growth rates of a rather high order. (*Economic Survey*, 1988-89, pp.45-46)

Industry and Drought

Can the pattern of low growth rates of certain industries and under-utilisation of industrial capacities be related to the effects of drought? If the performance of industries is made out to be influenced by the drought though not greatly, as has been the case in many official publications like the Mid-Term Review of the Seventh Plan, *Economic Survey*, etc., underutilisation of capacities may well be expected to reflect to some extent the impact of the drought. If wage-goods industries and agro-industries fail to make adequate use of capacities, it may be expected to reflect to some extent, on the one hand, in the form of reduced effective demand, the impact of the drought. On the other hand, inadequate supply of agricultural raw materials may produce a similar effect. One can see that compared to 1986-87, consumer non-durables increased surprisingly at a higher rate during the drought year. This shows that fall in agricultural incomes, particularly at lower levels, did not activate the demand constrain to lead to a fall in the growth of non-durable consumer goods. It seems that lower industrial growth rate of 1987-88 is attributable mainly to lower performance of basic goods, consumer durable goods and capital goods sectors. These disaggregated facts tend to suggest that neither higher nor slower growth of various industries seem to be related to the 'shock' administered by the drought, underlining the disproportionality and disjunction between agriculture and industry. In fact, the composition of industrial output, as reflected in sub-sectoral weights, and emergence of new, fast-growing industries, indicate that disjunction between agriculture and industry seems to have increased, particularly in the sense of industry becoming increasingly distanced from agriculture.

This trend may evolve into a one-sided relationship between agricul-

ture and industry in so far as the former tends to draw increasingly upon the latter for its input supplies but the latter may not have strong linkages with the former. The importance of this factor for its socio-economic and political implications has to be carefully analysed. This is essential more specifically in view of the fact that the per capital income gap between agriculture and industry is increasing as a result of a decline in the relative share of agriculture in GDP without a matching trend in its relative share in workforce. In so far as the purchases of agricultural goods by industry are adversely affected owing to the relative rate and pattern of industrial growth, but without the reverse happening noticeably as a result of the growing one-sided relationship between the two sectors, the terms of trade between the two sectors may develop biases inimical to agriculture.

Let us have a close look at some facts observable in the Indian economy over the later half of the 1980's:

- (1) The gross value of goods produced in the industrial sector outpaces the growth of gross value added in industry by a considerable despite increase in net value added per unit of physical output assumed by the new ending of industrial Production (1980-81), and
- (2) The use-based classification of industrial growth shows that the production of capital goods and consumer durable goods has grown at a relatively faster pace.
- (3) Normally expected drought-induced changes in the demand for industrial goods do not seem to have had a noticeable impact on the overall industrial growth and its composition.
- (4) "The composition of our imports has changed greatly during the eighties. In 1980-81, 65 per cent of our imports consisted of a few bulk commodities like foodgrains, edible oils, fertilisers, petroleum, and metals..... In 1987-88, these bulk commodities accounted for only 33 per cent of our imports. The other imports cover a vast range of raw materials, capital goods, chemicals and industrial components." (The Budget speech of Finance Minister, part A; 1989-90, *Economic Times*, p. five, March 1, 1989).

On the basis of these facts, it can be inferred that import-intensity of industrial production has increased quite considerable over the last few years. The fact that we have placed a large number of capital and intermediate goods on the OGL and have moved away from quantitative curbs on their imports have led to a spurt in the output of many

industrial goods in spheres like capital goods, consumer durables, automobiles, electric machinery and appliances and electronics. It seems that these imports, leading to screw-driver technology and kit-culture, may have made a not inconsiderable contribution to the relatively high rates of growth of industrial output. After all, growing trade deficit and higher than recently observed growth rates in industry have emerged simultaneously along with a large, qualitative change in the composition of imports along with disproportionality between agriculture and industrial growth rates and increased independence of the latter from the former.

Uneven and Unsteady Industrial Growth

Uneven growth of various industries can come about for many reasons associated with the processes of constant re-organisation of industrial capital, industrial structure and the interaction of various policy processes. The influences of market forces in the form of the pattern of demand, input prices, relative rates of return, availabilities of imported inputs, expectations, etc. do not operate autonomously of various public policies and plan programmes. Then, there is some unmistakable influence of technological changes, which could be fairly autonomous particularly owing to its external origins. Very few studies are available on the question of disparate growth rates of different industries. We have seen how different industries have grown at unsteady and at disparate rates. It seems public policy and planning for industrial development is yet to show an adequate response to this issue. Though it is often maintained that India went in for a balanced growth approach (Rudra, A., 1967 pp.6-11) particularly at the terminal year of the plan, the facts of industrial growth seem to indicate a haphazard pattern.

There is little doubt that disparate and unsteady growth of various industries (a distinct feature of our industrial scene) produces a series of adverse effects overtime. Regional economies get disturbed; lay-offs and retrenchments may ensue; inter-industry demand and supply relationships may get disturbed leading to disturbances in various price relativities; export prospects are adversely affected and large and fluctuating inventory level emerge. One wonders if anything other than more effective, flexible and realistic industrial planning, particularly in the context of what is termed the 'mixed economy' with a liberalised industrial policy regime, can deal with such wide variations in the rates

of growth of various industries output may not provide the requisite thrust for a balanced and steady growth of various industries, which is essential from 'efficiency' point of view as well.

Industrial Sickness

One manifestation of widely fluctuating growth rates is the phenomenon called 'industrial sickness', which is fairly widespread across many industries, region, size-groups of industrial enterprises and covers many organisational ownership forms. During the 1980s, the number of such units which are unable to repay their loans to banks and whose networth has been eroded owing to poor working results has increased from a little less than 24 thousand in mid-1980 to nearly 1.60 lakhs in mid-1987; an increase of nearly seven times over a period of seven years. As a result, the recovery of nearly Rs. 5.8 thousand crores of bank credit had become doubtful an increase of nearly four times since mid-1980. (See Table VII) It can be seen that while in terms of number of units, it is the small-scale sector, which accounts for an overwhelmingly large share of sick units, in terms of finances looked up the large sector's share exceeds 70 per cent. Apparently, larger units too are unable to avoid the non-viability threshold and by the logic of their size cause relatively greater dislocation. The fact that the number of sick units have increased during the 1980s at an average annual rate of over 37 per cent and the credit outstanding against such units at nearly 25 per cent annually (Figures much higher than the overall industrial growth rate) point to a grim scene. In the decentralised small sector, the phenomenon of industrial sickness has afflicted one unit out of every ten. Among the larger sick units, one can see units belonging to engineering and electrical, iron and steel, textiles, jute, chemicals, sugar, rubber and cement industries. This is a mixture of both traditional and relatively newer industries. Over the period, the contagion of industrial sickness has spread from the older, traditional ones to many more industries. This can be inferred from the relative increase in the large sick units belonging to the miscellaneous group from less than 18 per cent in mid-1984 to over 25 per cent in mid-group from less than 18 per cent in mid-1987. (Table VIII). West Bengal and Maharashtra - two of our premier industrial states - carry the largest chunk of sick industrial units.

The official statistics about sick industrial units does not cover some other critical dimensions like the loss of number of jobs, value of output, amount of excise and other taxes and value of exports. Similarly, the dis-

ruption caused to the entire industrial sector by breaks in input supplies and demand are also an aspect which may be difficult to be compiled on a regular basis. However, the importance of this dimension cannot be gain said. What is apparent is that this factor increases unused capacity and adversely affects overall capital-output ratio. How serious the employment loss arising from industrial sickness could be in our country; where organised industrial sector employment remains a rather small fraction of total workforce, particularly for some regions, can easily be appreciated, through for want of data, it is not possible to make precise formulations on the subject. The annual survey of labour scene for 1988 by the West Bengal Government's labour department shows that 'over the period 1983 to 1988, 1.20 lakh worker in eight industries (viz., jute, iron and steel, tea, engineering, cotton textiles, paper and paper products, chemicals and allied items and printing and allied industry) lost their jobs. In such industries like jute the figures in labour in West Bengal may well have been underestimated by a large margin. (*Business Standard*, 8 April, 1989, p.2)

An even more disturbing aspect of the unhealthy trends in the industrial sector is that most of the units which are reported sick are found to be non-viable. It means the resources invested in these units have become an irredeemable element. Among the small sick units, nearly 1.40 lakh units out of a total of about 1.58 lakhs were treated as non-viable. Among the large and medium units, numbering 1057 in June 1987, over half the number were considered non-viable. (*Economic Survey*), 1988-89, p.54)

Industrial sickness cutting across size and industry groups cannot be understood only or largely in terms of factors internal to the units concerned. The overall economic environment and the conditions in the markets for industrial products, raw-materials, inputs including basic infrastructural facilities, short and long run capital, labour etc. tax laws, various public policies for promoting industrial growth and regulation, external economic factors etc., are among the important factors which influence the fortunes of industrial enterprises. The operation of various tax evasion and tax avoidance practices and the growth of black economy also contribute to the growth in the number of sick industrial units. The usual kind of analyses which many financial analysts and bankers consider relevant for understanding the genesis of sick or weak units seem to be narrowly focussed and excessively micro in approach. It is an endemic and growing phenomenon which refers to the informal

process by which enterprises gradually move towards closer and ultimate collapse, endangering investment, employment, output and further growth. It is an informal process of exit in the face of legal difficulties facing an industrialist wishing to move out of a business, at times for legitimate business motives and at other times for various manipulative reasons. However, this micro decision has many broader macro factors underlying it. Attempts to understand it mainly in terms of micro and subjective factors is clearly misplaced. Attempts like those initiated in the form of and through the Board of Industrial and Financial Reconstruction (BIFR) tend to focus disproportionately on the micro and subjective factors.

An adequate explanatory framework for making sense of this phenomenon with a view to design an adequate policy response has to be based on theoretical framework of micro-macro interaction. The fact that the mainstream economics has made relatively little progress in building models of micro-macro interaction has affected various analyses of non-viability of industrial units. In some cases attention is given to various financial ratios without much effort to go behind the underlying factors. Various descriptive approaches make a listing of factors like inadequacies in project planning, execution and management, inadequate financial support, unexpected or unanticipated shortages of raw-materials, power or balancing equipment, sudden changes in public policies, etc. Often such factors are discovered *ex-post* and when it is too late, as can be seen from the number of non-revivable units. The diagnostic value of such approaches is rather limited. To say *ex-post* that it is owing to poor management or bad management indulging in diversion of funds, neglecting technological upgradation, failing to maintain proper industrial relations, incapable of adjusting to changes in market conditions etc, is largely tautological. It leaves open the question as to why a management succeeds in some ventures but does not do so in others and during a different period or region.

Further, it is misleading to blame industrial sickness on non-extension of liberalisation to include freedom of exit. Even when formal exit is circumscribed by some legal and procedural stipulations, an industrialist who has lost interest in an enterprise for a variety of subjective and objective reasons can withdraw or reduce working capital, neglect maintenance, delay or stop replacement, accumulate arrears of various liabilities and manipulate accounts to show cash losses. Whether one

calls this state industrial sickness or capital flight or bankruptcy, is a matter of semantics. In effect, either exit is imminent or can be postponed or stopped by public policy/by throwing in 'good' public money after 'bad' private money. Money macro and unexpected adverse factors would be common to practically all the firms in an industry. The reasons why only some firms become weak, sick or inclined to make an exit have to be seen in the investment and capital-reorganisation choices facing an industrialist in terms of the law of average rate of profit, relative competition position of various firms in the industry, including their locational, technological and externalities-based relative profitability and some specific factors. After all, even when the relative fortunes and future prospects of various industries change, it would be rare indeed when the fate of the industry as a whole is sealed. Hence relatively better units survive and the weaker ones or those under the control of industrialists having better options or excessively oriented to large windfalls (possible only in the underground economy) either become or are turned into sick units. All this is not to imply that in some cases units may become non viable on account of factors beyond the control and much against the efforts and wishes of their managements. Increasingly wider spread of sickness across various industries may be taken to indicate a strengthening of the general and macro factors reasonable for the phenomenon.

One factor discounting the appeal of micro factors as prime causes of sickness is that even the managements which are counted among the top-most industrial houses fail to prevent some of their units from becoming sick. The manner in which limited liability companies, working with a large sum of funds from public financial institution, and widely scattered shareholding population, actively indulge in generating black income for their managements appears to be an important factor contributing to industrial sickness. It appears, in quite a few cases, to be the result of bending existing institutions, practices and laws for making public resources serve narrow, private ends. Various policies concerning sick units do not seem to have developed a perspective based on a recognition of the emergence of a certain degree of vested interest in the growth of sick units. Recent policy initiatives like the setting up of The Board for Industrial and Financial Reconstruction (BIFR) under the provision of the Sick Industrial Companies (Special Provisions) Act, 1985 do not seem to properly and adequately recognise the character of the malaise called industrial sickness. Therefore, it is little wonder

that this move has hardly been able to stem the tide of industrial sickness, as we have seen in the foregoing. Growing industrial sickness, defying steps like specific policy initiatives, setting up of specific institutions, allocation of financial resources for revival and constant and better monitoring cannot be dismissed as pangs of growth, or inevitable price of structural change and rapid modernisation. One wonders whether growing industrial sickness and relatively greater contribution of lockouts than strikes in the loss of man-days are not the nemesis of the unleashing of the current barrage of liberalisation measures.

SSI Sector and Employment in Industry

The official statistics on the performance of the industrial sector is generally presented for the registered manufacturing and unregistered manufacturing sectors separately. Thus it is pertinent to analyse the performance of the SSIs as a separate category, particularly in view of special policy measures geared towards the SSI sector.

During the 1980s the number of SSI units increased by over 4 lakhs and now stands around 1.6 million. (See Table IX). Their value of output has been growing at constant 1970-71 prices at a relatively faster rate than the rate of growth of number of units. The value of output of SSI units in 1987-88, in real terms was of the order of Rs. 22.3 thousand crores. Since 1983-84 its average annual growth rate has been 12.25 per cent; which is clearly much higher than the overall rate of growth of manufacturing sector. This sector is sought to be encouraged by public policy, among other factors, on account of its relatively greater capacity to generate gainful employment. We find that employment in SSI units increased from 84.15 lakhs in 1983-84 to 107 lakhs by 1987-88. It is true that about 1/10 of the SSI units are afflicted by industrial sickness, which may adversely affect the employment generated by this sector. However, the fact remains that while total employment growth in manufacturing sector has been growing at a rate of less than 2 per cent annually, employment in SSI sector has increased at an average annual rate of 6.23 per cent for the period 1984-85 to 1987-88.

The employment performance of small scale industries bears comparison with that of the registered manufacturing sector. In the organised private manufacturing sector employment during the year 1984 was of the order of 44.73 lakhs which was reduced in 1987 to 44.09 lakhs only.

The employment in electricity, gas and water supply in the private sector is practically stagnant around 40 thousand while in private sector mining and quarrying, it has fallen from 1.1 lakhs in 1984 to 91 thousand in 1987. Compared to the performance of the private organised sector, the public

public sector employment increased from 17.17 lakhs in 1984 to 18.62 lakhs in 1987. Over the same period, there was a small increase in employment in electricity, gas and water supply from 7.85 lakhs to 7.91 lakhs. However, public sector mining and quarrying employed a smaller number (9.42 lakhs) in 1987 as compared to 9.66 lakhs in the preceding year. (See Table X and XI).

Thus one finds that the pick up in the rate of industrial growth over the 1980s (which has been considered by some not to be entirely real owing to the contribution made by the new method of presenting statistics in terms of new index numbers) turns out, in terms of employment, not to have lived up to the expectation of either meeting plan targets or the social responsibility of widening the home market by creating productive employment opportunities. Industrial employment growth during the seventh Plan period has been less than 2 per cent per annum. It falls short of the rate of growth of labour force at 2.5 per cent per annum. Hence, let alone the question of absorbing the backlog of unemployment, the Seventh Plan industrial growth would not be able to prevent a net accretion to the backlog of unemployment. Recently it has been reported that for the organised manufacturing sector as a whole during the 1980s, employment elasticity with respect to output has declined to 0.29 from the level of 0.5 during the 1970s. If one looks at the total employment elasticity of both the organised and unorganised sector, viz. for the total manufacturing sector, it is found that employment elasticity with respect to output over the period 1973-87 was 0.6 (*Financial Express*, April 11, 1989.) Thus it is clear that the unorganised manufacturing sector has shown higher employment elasticity with respect to output than that shown by the organised sector. This factor becomes all the more significant in the light of the increased disproportionality between agricultural and industrial growth which is reminiscent of the first fifteen years of planning. There have been some recent policy changes which have tended to bring about de-reservation of certain items from the SSI sector. If employment objective is to be taken seriously, it may be worthwhile to re-examine the policies with respect

to de-reservation of SSI items. More importantly, since employment growth is pursued indirectly via employment elasticity of output and this factor has shown adverse results, policies for fostering output growth have to be re-examined, particularly with respect to technology, pattern of demand, informal-formal and agriculture-industry relationships.

While unregistered manufacturing and SSI sector have outperformed the registered manufacturing both in terms of growth of output and employment, the industrial scene in India continues to show the continuation of the processes of concentration and centralisation, particularly with respect to assets. The tables XII & XIII on the growth of assets and turnover of the companies under the control of the large industrial houses, make it evident. One has to see whether the performance of the industrial sector can provide a functional justification for the processes of concentration and centralisation.

Industrial Policy Changes : Claims of improvement in industrial growth have to be seen in the context of a large number of changes or, what are called "reforms (in) the overall policy regime" (*Economic Survey, 1988-89*, p.46) which have been introduced through nearly continuous stream of official notifications over the Seventh Plan period. A number of authoritative accounts of these changes are available in the *Economic Survey* for the last 3 years as also in The Annual Reports of the Industrial Development Ministry. Hence we need not attempt to recapitulate them here. These measures have a definable design and thrust. However, they have been announced through a series of notifications over the entire Seventh Plan period. This kind of policy-making in instalments may create some problems. For one, it becomes difficult to keep track of them. As a matter of fact, their overall design and direction may not be easily comprehensible. Since the industry is expected to respond to these changes, the advantages of announcement effects of a comprehensive package may not materialise. One wonders whether the broad design of the 'reform' has been prepared and it is only the announcements which are in instalments or even the decisions are made that may. From the point of view of industrial planning, it is not clear how far these changes are in conformity with the Seventh Plan industrial policy perspective. Though we do not intend to attempt a comprehensive review of the emerging policy regime, it may be worthwhile to analyse the broad directions taken by the industrial policy in the light of recently observed trends in the performance of Indian industries.

Major plank of industrial policy changes concerned the policies for increasing industrial production by means of ensuring ease of entry. This has been brought about partly by means of de-licensing and partly by simplifying the conditions for grant of licences. The purpose behind this move seems to be to bring about additions to industrial capacity on the basis of the perception of market opportunities by the entrepreneurs and unhindered by governmental clearance. The element of competition thus introduced is expected to spur adoption of high technology leading to lower cost and improved quality. Moves in this direction date back to mid-1970s. Now the limits upto which licensing requirements are not required have been raised scope of delicensing widened and many large companies which were neither eligible for capacity expansion nor for fresh investments without prior government approval have been freed of this requirement. In a number of industries new units can be put up just by registering the units with the appropriate authorities (SIA).

As a supplement to this move, policies have been initiated for removing regulatory hurdles preventing fuller and intensive use of existing capacities or expansion for adjusting the production mix to current pattern of demand. Production in excess of capacities is no longer frowned upon. Liberal rules for capacity re-endorsement have been adopted.

These modifications have especially been geared to bring about a change in the pattern of location of industries in favour of identified backward areas and against large metropolitan areas. A number of provisions of MRTP Act were considered inimical to capacity expansion and creation. Consequently the MRTP rules have been liberalised with a view to make larger economic space available to the MRTP companies. In this respect the exemptions have been extended to dominant undertakings as well. For some specific industries like leather special liberalised rules have been announced. Price and distribution controls have been removed or relaxed from many industries like sugar, cement and aluminium. Depreciation provisions have been liberalised. For electronics, automobiles and textiles specific policy resolutions have been announced. In order to give scope to the freerplay to market forces in the use of existing capacity, broad-banding has been introduced in as many as 40 industries. Capacity expansion for broad-banding has been permitted. This concession is also available to MRTP/FERA companies for some specified items.

It is hoped that as a response to these steps, Indian Industries move towards greater competitiveness and cost-consciousness. For this purpose a number of steps have been taken. For one thing, freedom of entry is expected to build up competitive pressures for cost reduction. High cost industries would no longer be permitted to enjoy the protection of licensing. This is referred to as enhancing internal competitiveness. Secondly, liberalisation of trade by enlargement of OGL and more vigorous wooing of foreign and NRI capital is expected to bring in competitive pressure from abroad for inducing Indian firms to go in for cost-reduction. Liberal import of technology, external finance, ease of entering collaboration agreements, de-licensing and minimum economic capacity rules are expected to help this process.

Since the scale of production in India is not considered large enough to ensure adequate economies of scale, for 84 industries minimum economic capacity or scale of production has been prescribed. The existing units are allowed to expand capacities in order to reach the minimum economic capacities, while the new units are sanctioned capacities at this minimum level.

These policies, basically in the sphere of a marked relaxation of the regulatory measures, are expected to bring about a spurt in entrepreneurial activities by removing various curbs and irritants, including procedural-bureaucratic delays. Some of the policies for the encouragement of the SSI, like reservations of items, have also been modified to facilitate growth by the entry of larger units. Various promotinal measures are clearly a necessary complement of the new thrust of fostering cost-effective, competitive growth. For this purpose, the PFIs have liberalised and enlarged the flow of public funds to support private investment initiatives. According to the *Annual Report* of the Ministry of Industrial Developments PFI's sanctions and disbursements increased by 16.5 per cent and 19.9 per cent respectively during 1987-88 (*Economic Times*, April 20, 1989). These measures have been buttressed by fiscal support to expansion, investment, R&D, modernisation and technological upgradation. Various funds have been set up for textiles, sugar, jute and other industries. BIFR has been set up for dealing with sick units. Leasing is sought to be encouraged by being accorded the status of industry for purpose of support. A number of spheres hitherto open only to public sector like oil refining and some related to defence production, have been made accessible to private sector. Many steps

have been taken to improve the investment climate for foreign capital and attracting the NRI investments. Efforts to boost the stock markets have been made. Steps to unearth black incomes and wealth and apprehend tax-evaders have been soft-pedalled. Overall inflationary conditions have been prevailing which are considered conducive to rising profitability.

Analytically, these policy modifications may be characterised as steps towards de-regulation, greater private sector and market orientation which open the door a little wider to foreign finance, capital goods, technology and enterprise. However, they do not make the beginning of a hands-off policy on the part of the government. It maintains and strengthens its promotional role for making finances and infra-structural support available as also for preventing competition to lead to fragmentation of industrial capacities. Fiscal, monetary and credit policies too are made growth-oriented with a modicum of concern for price stability in the sense of checkmating run-away inflation.

Similarly, it is attempted to ensure that trade policy too contributes to industrial growth by providing access to advanced technology for competitive cost-structure, and improved quality of products. In sum, the remaining ideological baggage in terms of insistence on channelising private investment in government determined directions as embodied in the plans through physical controls, regulation of private industry, reservation of spheres for public sector and SSIs, keeping foreign capital on policy determined track etc. have been considerably watered down in favour of growth and market oriented open-door policies.

On the basis of the basic design of the modifications, the manner of its unfolding and the available limited amount of facts, a few observations can be made without, of course, implying an overall and detailed evaluation of these policy measures.

Despite doubts cast on account of the composition and assumptions of the new index of industrial production, it seems industrial output has increased somewhat faster during the 1980s than in the preceeding 15 years or so. If one looks at a somewhat longer period, say, 1970 to 1986, it seems on the basis of data for 600 industries published by the Centre for Monitoring Indian Economy (*Production and Capacity Utilisation in 600 Industries, 1970-86*, CMIE, Bombay) that during this period,

capacity utilisation has come down from 85.2% in 1970 to 77.3% in 1986 with only a handful of industries like tooth powder & paste, dairy machinery, air compressors, beer, forged handtools, soap, boilers, infant milk food, railway locomotives, etc. recording more than 100 per cent use of capacity. A large number of important industries like cast iron, spun pipes, steel pipes and tubes, paper machinery, commercial vehicles, nuts, bolts and rivets, diesel engines, pencilin, mining machinery, cigarettes, steel castings, leather cloth, rubber and plastic insulated wires, electricity generation, etc. recorded less than 50 per cent capacity utilisation. Cement, vanaspati, scooters, railway wagons, matches, plywood, cotton fabrics, synthetic detergents, bicycles, saleable steel, jute textiles, machine tools, many chemical and drug industries, cotton yarn etc. had a good amount of unused capacity. With increase in unused capacity the objective of cost-reduction could hardly be realised.

In the light of these facts, as also those seen earlier regarding under-utilised capacity, there arise a number of doubts regarding the rationale for adopting new policies for setting up industrial capacities involving heavy investment. Similarly, the stipulations regarding the setting up of minimum economic capacity seem to ignore the question of factors inhibiting the use of existing capacities and factors like demand constrain which lead to excess capacity, especially when the infrastructural bottlenecks are not too onerous.

The official review of industrial performance expresses legitimate concern over the rather poor and even negative showing on the employment front. However, an overview of recent policy measures does not indicate any moves in terms of relative factor pricing, choice of techniques and R&D for employment generating industries, increased demand for labour intensive products, fiscal incentives for firms increasing employment facilitation of retraining of retrenched workers, etc., which could be expected to increase employment and nullify the impact of factors hampering greater labour-absorption in industry.

It may probably be suggested that incentives and concessions for locating industries in backward regions could be expected to help reduce unemployment as these areas are poverty-concentration areas. Keeping aside the question of the effectiveness of backward area policies, it is more the nature of the industry in terms of product, technology, raw material demand etc. than its location which influences

its employment impact, especially in a country which neither discourages migration of labour nor follows the 'sons of the soil' employment policy. In any case, an analysis of the data regarding the number of industrial units for which ILS and Lisare issued and are registered with SIA and DGTD for the year 1986 shows that the Northern and Western region maintain their lead, with Maharashtra and UP at the top and the Eastern region at the tailend with about a bare 10 per cent of the total. (*Financial Express*, April 20, 1989, p.3)

Certain industries have been freed from control over pricing and distribution. Increased production in the aftermath of decontrol has been pointed out by many as *post facto* justification for the scheme of liberalisation. For example, it is pointed out that after partial decontrol in February 1982 installed capacity of the cement industry doubled from 29 million tonnes at the end of 1981-82 to over 57 million tonnes currently. This resulted in increase in production from 21 million tonnes to 43.5 million tonnes over the same period. However, a little detailed look tells a different story. The Cement Manufacturers Association (CMA) recently released a study of 42 cement companies which among themselves control 80 per cent of total cement capacity (*Business Standard*, 19th April, 1989). The study covers the period 1983-88. It is revealed by the study that post-tax returns on networth fell from 36 per cent in 1983 to zero per cent in 1987 and became negative in 1988. These findings are confirmed by the RBI data which show that gross profit as a percentage of sales declined from 8.7 per cent in 1984-85 to 6.5 per cent in March 1989. Cement industry is complaining that it is getting overburdened with excessive inventories worth about Rs. 500 crores. The CMA pleads that the Government and BIFR must come to the rescue of the industry by giving them liberal loans, a 2 year moratorium on repayment of loans and interest. The industry fears that if these demands are not met, the bulk of the cement industry might become sick. It is clear that decontrol is no magic wand and the success of an industry is not assured by a combination of decontrol with fixation of minimum economic capacity.

In Lieu of Conclusions

On the basis of the foregoing, one may draw some tentative conclusions regarding the direction in which our industries are moving and the contribution of industrial policies in this regard. This, however, depends

on the degree of boldness and the capacity to make moral or value judgements which one possesses. What may, however, be indicated is that great hopes were pinned on industries in transforming society and economy in poor countries like India. The industries were to be the basis not only for narrow or small time changes in the economy, particularly its production structure. Industrialisation was linked with the very motion of development, which in the ultimate analysis is a pronounced manifestation of what one understands by a good and meaningful life for the citizens of a country. Analysts of development experience in Third World countries can hardly shy away from evaluating what have been regarded the 'goodies' a society creates for its citizens. In this connection the pattern of industrial changes in India can be appreciated probably in terms of the nature of goods (and the technology of their production) whose weight in the index of industrial production is increasing. In this connection it may not be out of place to quote Prof. S. Chakravarty, "there should be more extensive attempts to initiate a motion of what a good life consist in. The World has replaced the motion of life in 'Polis' with its civic humanism, a characteristic of the earlier renaissance, by a scramble for the so-called 'good things' which are all privately appropriable. This has led to a re-emergence of the acquisitive society in its Thatcherite-Reaganite form, which implanted in a poor society, can prove seriously disruptive". ("The trap of the good life", *Patriot*, April 20, 1989). Read in the context of the performance with respect to composition of output, employment in industries and the prices of manufactured goods, one may obtain some indication regarding the sections of society who form a part of the aquisitive society and those who fail to find a place in it. Table XIV shows the detailed break-up of the performance of consumer electronics for 1981 and 1985 to 1988. That consumer electronics grew at a compound annual rate of growth of 38.5 per cent and that the share of consumer electronics in total electronics increased from 28.7 per cent to 38.1 per cent over the eighties show how an acquisitive consumerism is growing as an important component of industrial growth.

Table I

S.No.	Sector	Estimated Employment	Projected Employment in 1989-90	Seventh Plan created additional employment
1.	Manufacturing	26.790	33.466	6.676
2.	Mining & Quarrying	1.153	1.494	0.341
3.	Electricity	1.031	1.498	0.467
4.	Total	28.974	36.858	7.484

Table II
GDP at factor cost by Industry Origin (at 1980-81 Prices) (in Rs. crores)

	Agriculture forestry and logging, fishing Quarrying	Manufacturing Construction electricity, gas and water supply	Transport Communication and trade	Banking and insurance, real estate and owner- ship of dwelling and business services	Public admini- stration, defence and other services	GDP at factor
1980-81	48366 (39.5)	29747 (24.3)	20437 (16.7)	10841 (8.9)	12835 (10.5)	122226 (100)
1981-82	51280 (39.5)	32000 (24.7)	21860 (16.8)	11354 (8.7)	13282 (10.2)	129776 (100)
1982-83	50745 (37.9)	33369 (24.9)	23187 (17.3)	12215 (9.1)	14314 (10.7)	133830 (100)
1983-84	56159 (38.8)	36536 (26.2)	24522 (16.9)	12775 (8.8)	14825 (10.2)	144817 (100)
1984-85	56440 (37.5)	38841 (25.8)	25787 (17.8)	13571 (9.0)	45903 (10.6)	150542 (100)
1985-86	56746 (35.9)	42124 (26.6)	27809 (17.6)	14420 (9.1)	17077 (10.8)	158176 (100)
1986-87	55850 (34.0)	45594 (27.7)	29192 (17.8)	15467 (9.4)	18338 (11.2)	164441 (100)
1987-88	55476 (32.6)	48665 (28.6)	30489 (7.9)	16191 (9.5)	19542 (11.5)	170363 (100)

Source: *Economic Survey 1988-89*

Note: Figures in the parentheses indicate percentage share of GDP.

Table No. III
Annual Growth Rates in major sectors of Industry (in Percentage) Base 80-81

Year	Mining (11.46)	Manufacturing (77.11)	Electricity (11.43)	Total (100.00)
Weights				
1980-81*	6.0	3.7	5.8	4.0
1981-82	17.7	7.9	10.2	9.3
1982-83	12.4	1.4	5.7	3.2
1983-84	11.7	5.7	7.6	6.7
1984-85	8.8	8.0	12.0	8.6
1985-86	4.2	9.7	8.5	8.7
1986-87	6.2	9.3	10.3	9.1
1987-88	3.6	8.2	7.7	7.5
1988, April Nov.**	7.0	9.9	7.5	9.3

* Relates to the base 1970-71.

** Relates to percentage increase over the corresponding period in the previous year.

Source: *Economic Survey, 1985-86*, p. 41, & 1988-89. p. 44

Table IV
Use-Based group indices of Industrial Production
(Base : 1980-81 = 100)

Industry Group	Weight	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	Average Annual Growth	Vari- ence	Co-effi- cient	Vari- ation
1	2	3	4	5	6	7	8	9	10	11	12	12
Basic Goods	39.42	110.9 (10.9)	118.7 (7.0)	125.7 (6.0)	139.7 (11.1)	149.2 (6.8)	163.0 (9.2)	172.2 (5.6)	8.09	4.52	0.26	0.26
Capital Goods	16.43	106.7 (6.7)	110.6 (3.7)	123.6 (11.7)	127.2 (3.0)	140.7 (10.6)	166.3 (18.2)	192.9 (16.0)	9.99	29.44	0.54	0.54
Intermediate Goods	20.51	103.7 (3.7)	104.6 (1.0)	114.9 (9.8)	126.1 (9.7)	135.5 (7.5)	141.5 (4.4)	148.1 (4.7)	5.83	9.24	0.52	0.52
Consumer Goods	23.65	113.8 (13.8)	112.0 (-1.6)	140.5 (5.6)	122.0 (7.2)	137.3 (12.5)	147.1 (7.4)	158.0 (7.6)	6.86	25.67	0.74	0.74
Consumer Durables	2.55	110.9 (10.9)	121.0 (9.1)	140.5 (16.1)	170.8 (20.6)	202.8 (18.7)	241.2 (18.9)	259.6 (7.6)	14.70	25.63	0.34	0.34
Consumer non-durables	2.10	114.1 (14.1)	110.9 (-2.8)	110.5 (-0.4)	116.1 (5.1)	129.4 (11.5)	135.7 (4.9)	145.8 (7.4)	5.69	31.08	0.98	0.98
All		9.3	3.2	6.7	8.6	8.7	9.1	7.5	7.69	3.93	0.26	0.26

Note : Figures within brackets indicate percentage change over the preceeding year.

* Provisional.

Source : *Economic Survey, 1988-89.*

Table No. V
Industrial Approvals Since 1986-87
(In Numbers)

Sl. No.	Indicators	1986-87	1987-88	April-November	
				1987-88	1988-89
(1)	(2)	(3)	(4)	(5)	(6)
1.	Fresh Approval for setting up new Industrial Capacities :				
	(a) Letters of Intent Issues	997	971 (-2.61)	647	720 (+11.28)
	(ai) Of which those issued for backward areas	533	525 (-1.5)	358	374 (+4.47)
	(b) Registrations issued by STA under the scheme of delicensing	2575	1750 (-32.20)	1062	836 (-21.28)
	(bi) Of which issued for backward areas	1600	1020 (-32.20)	613	504 (-17.78)
	(c) Cash approved under the scheme of Minimum Economic Scales	134	46 (-65.67)	34	23 (-32.35)
	Total	3706	2767 (-25.34)	1743	1579 (-9.41)
2.	(a) Industrial Licenses Issued by way of letters of intent/direct licenses	499	349 (-30.06)	255	201 (21.18)
	(ai) Of which those issued for backward areas	230	147 (-36.09)	105	92 (-36.09)
	(b) Cases approved under the scheme of broad branding	108	112 (+3.7)	74	47 (-36.49)
	Total	882	682 (-22.65)	475	408 (-10.11)

Table V (Contd..)

Sl. No.	Indicators	1986-87	1987-88	April-November	
				1987-88	1988-89
(7)		(8)	(9)	(10)	(11)
3.	Foreign Collaboration approvals on the basis of clearance accorded by FIB.	649	587 (-9.55)	385	443 (+15.06)
4.	CG approvals on the basis of clearance accorded by the CG (main) Committee.	236	216 (-8.47)	148	155 (+4.73)
5.	DGTD registrations	1244	1133 (-8.92)	715	450 (-37.06)
	(a) of which those issued for background areas	647	613 (-5.54)	377	272 (-27.85)

Source : *Economic Survey, 1988-89.*

Note : Figures in parentheses indicate percentage change over the previous year.

Table No. V A

Growth and distribution of the number and Paid-up-Capital of Companies Since 1985-86

1985-86		1986-87		
Number	Paid-up-Capital (In Rs. crores) year	Number	% increase Over previous year	Paid-up-Capital (In Rs. crores) % increase over pre- vious year
(2)	(3)	(4)	(5)	(6)
Govt. Companies	1020 (0.83)	1041 (0.75)	2.06	28638.2 (78.71)
Non-Government Companies	1,21,139 (99.17)	137149 (29.25)	13.21	7745.8 (21.29)
Total Companies	1,22,159 (100)	138190 (100)	13.12	36384.0 (100)
				13.26
				16.32
				13.90

Growth and Distribution of the number and Paid-up-Capital of Companies
Table VA

1987-88		August, 1988			
	Number	% increase over previous year	Paid-up-Capital (Rs. Crores)	% increase over previous year	Number
	(8)	(9)	(10)	(11)	(12)
1.	1096 (0.70) 1,54,453 (99.30)	5.21 12.62	34,2853 (77.7) 9,838.8 (22.30)	19.72 27.02	1104 (0.67) 1,163,299 (99.33)
2.	1,55,549 (100)	12.56	44124.1 (100.0)	21.27	1,164,403 (100)
3.					

Figures in parentheses indicate column percentage distribution.

Source : *Company News and Notes*. (Various Issues).

Table No. VI

Select Industries' capacity utilisation

Name of the Industry	1986-87			1987-88						
	Accounting Unit	No. of Units	Installed Capacity	Production	(7)	(8)	Installed Capacity	No.	Production (Estimated)	
(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Glass Bottles and Misc. Glassware	Tonnes	31	65,930	5,40.00	82.71	31	652930	595000	91.23	
Sheet Glass	Sq. Meter in zone basis	9	40.79	38.28	93.85	9	40.79	42.0	102.57	
Vacuum Flasks/ Refills	Mill: No.2	4	7.10	8.30	116.90	4	7.10	9.0	126.76	
Laboratory Glassware including N.G. tubes	Tonnes	3	17680	9750	55.15	3	17680	106800	61.09	
Fibre Glass	Tonnes	3	5290	4210	79.58	3	5290	5650	87.90	
Paints, Enamels & Varnishes	Tonnes	24	2,26,467	1,68,250	74.29	24	2,78,467	1,85,000	66.44	
Oxygen	MCM	160	186.5	158	87.72	172	194.5	174	90.49	
DA	MCM	86	21.8	11.6	53.21	87	22.2	12.0	54.05	
Argon	MCM	8	4.9	1.9	38.72	8	4.9	2.2	44.90	
Hydrogen	MCM	14	19.2	8.7	45.21	14	19.2	9.5	49.81	
Hydrous Oxide	Mill. Lt.	6	59.2	510	86.15	6	592	550	92.91	

Table VI (Continued)

12. Explosive	Tonnes	16	2,02,00	1,18,437	58.63	70	2,17,000	1,25,000	57,60
13. Detonators	Mill. Nos.	3	288.5	233,007	97.59	3	288.5	288.00	82.50
14. Detonating fuse	Mill. Metre	8	35.7	29,001	8.23	4	38.71	32.00	82.50
15. Safety Fuse	-- do--	2	72.1	42.9	60.34	2	81.1	44.31	54.64
16. Steel Pipes and Tubes (ERW. Precision)	MT	82	26.55	8,54,000		83	27,81,000	8,60,000	30,92
17. Seamless Steel Pipes and Tubes	MT	4	1,34,000	55,656	41.43	4	1,34,000	65,000	48
18. Stainless Steel	MT	5	6,000	2,685	40.68	7	7,280	3,145	43

Figures in parantheses show capacity use in percentage terms.
 Source : *Annual Report 1987-88*, Department of Industrial Development,
 Government of India, Ministry of Industry, New Delhi.

Table No. VII

Sick Industrial Units

At the end of June	Small Scale Units			Medium Scale Units			Large Scale Units*			Total	
	No.	Outstanding Bank Credit (Rs. crores)	(3)	No.	Outstanding Bank Credit (Rs. crores)	(5)	No.	Outstanding Bank Credit (Rs. crores)	(7)	No.	Outstanding Bank Credit (Rs. crores)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1980	22325	292.75	1026	219.17	389	1237.70	23740	1744.62			
1981	22360	321.52	960	137.16	422	1452.29	23742	1911.97			
	(0.2)	(9.8)	(-6.4)	(-37.4)	(8.5)	(17.9)	(0.0)	(9.6)			
1982	26973	393.64	1020	176.14	435	1728.95	28428	2298.76			
	(20.6)	(22.4)	(6.2)	(28.4)	(3.1)	(19.0)	(19.7)	(20.2)			
1983	64388	626.52	1211	253.05	463	1913.1	66062	2792.67			
	(138.7)	(59.1)	(18.7)	(43.7)	(6.4)	(10.6)	(132.4)	(21.57)			
1984	81647	788.3	1437	373.17	513	2112.44	83591	3273.91			
	(26.8)	(25.8)	(18.7)	(47.5)	(10.8)	(10.4)	(26.5)	(17.2)			
1985	97890	954.64	1181	195.13	597	2655.39	99668	3805.17			
	(19.9)	(21.1)	(-17.3)	(-47.7)	(16.4)	(25.7)	(19.2)	(16.2)			
1986	128687	1184.22	1230	242.37	689	3238.64	130806	4665.23			
	(31.5)	(24.0)	(4.1)	(24.2)	(15.4)	(22.0)	(31.0)	(22.6)			
1987	158226	1542.25	--	--	1712**	4195.63**	159938**	5737.88			
	(22.95)	(30.23)	--	--	(-10.79)**	(22.14)**	(22.46)	(22.99)			
Average Annual Growth Rate	37.24	24.89	--	--	--	--	(35.86)	(22.66)			

* Those individually enjoying aggregate bank loan of Rs. 1 crore or more from the banks.

** Relates combined classes Medium & Large.

Note : Figures in the Paratheses indicate percentage increase over previous year.

Source : i) Rao, S.R.K. (1988) What causes Industrial Sickness. Commerce Weekly, April 2-8, 1988 p-7.

ii) *Economic Survey 1988-89*, p. 54.

Table No. VIII
No. Of Large Sick Industrial Units* and Outstanding Bank-Credit. (amount in Rs. Crores)

Industry	End June 1984		End June 1985		End June 1986		End June 1987	
	No. of Units	Amount Outstanding	No. of Units	Amount Outstanding	No. of Units	Amount Outstanding	No. of Units	Amount Outstanding
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Eng. & Electricals	121	437.14 (20.7)	153	629.31 (23.7)	175	788.10 (24.3)	326 (30.82)	815.63 (30.43)
2. Iron & Steel	35	160.29 (7.6)	39	196.48 (7.4)	38	166.38 (5.1)	45 (4.3)	77.15 (2.88)
3. Textiles	140	697.87 (33.0)	162	962.39 (36.2)	196	1118.38 (34.5)	213 (20.15)	898.53 (33.52)
4. Chemicals	29	157.35 (7.5)	34	113.67 (4.7)	39	140.08 (4.3)	122 (11.54)	149.28 (5.57)
5. Sugar	43	164.16 (7.8)	46	148.16 (5.6)	47	177.02 (5.5)	26 (2.5)	105.42 (3.93)
6. Jute	36	120.45 (5.7)	44	151.65 (5.7)	43	199.58 (6.2)	36 (3.4)	109.08 (4.07)
7. Rubber	16	123.16 (5.8)	16	126.14 (4.7)	16	127.17 (3.9)	19 (1.8)	78.75 (2.94)
8. Misc	91	242.94 (11.5)	100	318.14 (12.0)	140	480.61 (14.8)	267 (25.5)	416.00 (15.52)
9. Cement	2	9.08 (0.4)	3	9.45 (0.4)	5	41.32 (1.9)	5 (1.14)	30.74 (1.14)
Total	513	2112.44 (100.0)	597	2655.39 (100.0)	689	3238.64 (100.0)	1057	2680.44

Notes : Figures in the parentheses indicate percentage to the total.

* Large units are those individually enjoy aggregate units of credit of Rs. 1 crore or more from the previous banking system.

Source : Report on Currency & Finance, Vol. No. 1, Table IV-7, 1986-87.

Table No. IX
Performance of Small-scale Industries

Year	Number of units (Lakh)	Value of output (Rs. crores)	(3) in 1970-71 Prices	Employment (lakh)
1	2	3	4	5
1983-84	11.58	41.620	14070	84.15
1984-85	12.42 (7.3)	50.520 (21.4)	15812 (12.4)	90 (7.1)
1985-86	13.53 (8.9)	61.100 (20.9)	17834 (12.8)	96 (6.7)
1986-87	14.76 (9.1)	72.250 (18.2)	20103 (12.7)	101.4 (5.6)
1987-88	15.92 (7.9)	85.700 (18.6)	22329 (11.1)	107 (5.5)
Annual Average Growth(%)	8.3	19.78	12.25	6.23

Note : Figures in parentheses relates to percentage increase over previous year.

Source : Various Issues of *Economic Survey* and *Report on Currency and Finance* (RBI, 1986-87) p. 69.

Table No. X
Employment in the Private Sector-Industry (In Lakhs)

Year	Primary Sector		Secondary Sector		Tertiary Sector		Total	
	No. of person employed	% change over the preceeding year	No. of person employed	% Change over the preceeding year	No. of person employed	% Change over the preceeding year	No. of person employed	% change over the preceeding year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1981	9.88 (13.36)	--	46.52 (62.91)	--	17.55 (23.75)	--	73.95 (100.0)	--
1982	9.80 (12.98)	-0.81	47.68 (63.17)	+2.49	18.00 (23.85)	+2.56	75.48 (100.0)	+2.07
1983	9.67 (12.81)	-1.32	47.61 (63.04)	-0.15	18.24 (24.15)	+1.33	75.52 (100.0)	+0.05
1984	9.32 (12.69)	-3.62	45.78 (62.32)	-3.84	18.36 (24.99)	+1.66	73.45 (100.0)	-2.73
1985	9.20 (12.59)	-1.29	45.3 (63.98)	-1.06	18.59 (25.43)	+1.25	73.09 (100.0)	-0.50
1986	9.33 (12.67)	+1.30	45.97 (62.34)	1.48	18.43 (25.48)	-0.86	73.73 (100.0)	0.88
1987*	9.39 (12.74)	0.75	45.07 (61.16)	-0.97	19.23 (26.09)	-2.56	73.69 (100.0)	0.09

+ Related to non-agricultural establishments in the private sector employing 10 and more persons.

* Provisional

Source : Compiled from *Economic Survey 1988-89*, pp. s-47.,

Note : Figures in parantheses are percentages to the total.

Table XI
Employment in Public Sector Industry (In Lakhs)

Year	Primary Sector			Secondary Sector			Tertiary Sector			Total	
	No. of person employed	% change over the previous year		No. of person employed	% Change over the previous year		No. of person employed	% Change over the previous year		No. of person employed	% change over the previous year
(1)	(2)	(3)		(4)	(5)		(6)	(7)		(8)	(9)
1981	12.81 (8.28)	--		32.74 (21.14)	--		109.29 (70.58)	--		154.84 (100.00)	--
1982	12.89 (8.08)	0.62		34.02 (21.34)	3.91		112.55 (70.58)	2.98		159.40 (100.0)	2.98
1983	13.60 (8.26)	5.51		34.75 (21.12)	2.15		116.21 (70.62)	3.25		164.56 (100.0)	3.20
1984	14.16 (8.36)	4.12		35.70 (21.16)	2.73		118.83 (70.45)	2.25		172.69 (100.0)	2.37
1985	14.72 (8.52)	3.95		36.67 (21.23)	2.72		121.30 (70.24)	2.08		172.69 (100.0)	2.37
1986	14.92 (8.44)	1.35		37.81 (21.38)	3.1		124.10 (70.18)	2.31		176.83 (100.0)	2.40
1987	14.99 (8.3)	0.00		38.37 (21.3)	1.48		126.9 (70.4)	2.23		180.28 (100.0)	1.95

*Provisional

Note : Figures in parentheses indicates percentages to the total.

Source : compiled from *Economic Survey, 1988-89*, p.46

Table No. XII
Assets of 20 largest Private Business Houses
(Hours arranged according to their assets in 1987)

Sl. No.	Business House	(Rs. crores)				
		1987 (Estimated)	Change on Year (%)	1986 (Actual)	Change on year (%)	1985 (Actual)
1.	Tata	4934.18 (19.3)	13.5	4348.94 (18.7)	17.06	3698.84 (18.4)
2.	Birla	4775.08 (18.7)	3.7	4606.57 (19.8)	12.0	4111.55 (20.5)
3.	Reliance	2579.47 (10.1)	27.6	2021.53 (8.7)	91.4	1056.36 (5.3)
4.	J.K. Singhanian	1356.62 (5.3)	10.3	1229.94 (5.3)	16.4	1057.3 (5.3)
5.	Thapar	1202.15 (4.7)	4.9	1145.83 (4.9)	7.3	1067.86 (5.3)
6.	Mafatlal	1066.29 (4.2)	8.7	980.95	1.7	964.60 (4.8)
7.	Bajaj	957.72 (3.7)	23.2	777.55 (3.3)	25.4	619.87 (3.1)
8.	Larsen & Toubro	931.55 (3.6)	12.2	830.56 (3.6)	16.4	714.93 (3.6)
9.	Modi	889.24 (3.5)	3.3	860.56 (3.7)	5.1	818.36 (4.1)
10.	M.A. Chidambaram	788.12 (3.1)	-2.4	807.50 (3.5)	4.4	773.27 (3.9)
11.	A.C.C.	768.36 (3.0)	1.1	760.33 (3.3)	2.4	742.68 (3.7)
12.	TVS	731.69 (2.9)	16.3	629.14 (2.7)	21.4	519.30 (2.6)
13.	Shri Ram	642.63 (2.5)	12.3	572.33 (2.5)	5.6	541.78 (2.7)
14.	Bangur	602.80 (2.5)	-4.1	670.53 (2.9)	3.0	650.8 (3.2)
15.	Hindustan Lever (2.4)	609.70	29.9 (2.0)	469.26	7.6 (2.2)	435.98
16.	Walchand	588.74 (2.3)	-6.4	629.14 (2.0)	3.6	607.11 (3.0)
17.	I.T.C.	565.47 (2.2)	-0.5	572.33 (2.4)	55.1	369.0 (1.8)
18.	I.C.I.	540.43 (2.1)	19.2	453.52 (1.9)	1.5	446.9 (2.2)
19.	Kirloskar	523.93 (2.0)	10.4	474.62 (2.0)	9.6	443.0 (2.1)
20.	Mahindra	441.77 (1.7)	-3.3	456.78 (1.9)	5.9	431.11 (2.1)
Total		25540.26 (100.0)	9.6	23297.91 (100.0)	16.1	20061.1 (100.0)

Note: Bracket figures indicate the percentage share in total.

Source: 1. Company News and Notes, Department of company Affairs, GOI, Various Issues.

Table No. XIII
Turnover of 20 largest Business Houses
(Houses arranged according to their assets in 1987)

<i>(Rs. crores)</i>						
Sl. No.	Business House	1987 (Estimated)	Change on Year (%)	1986 (Actual)	Change on year (%)	1985 (Actual)
1.	Tata	5236.21 (19.6)	16.0	4515.16 (19.1)	9.3	4130.18 (18.7)
2.	Birla	4534.41 (17.0)	6.3	4266.09 (18.0)	0.8	4230.81 (19.1)
3.	Reliance	1337.40 (5.0)	40.6	951.22 (4.0)	22.3	777.55 (3.5)
4.	J.K. Singhania	1335.26 (5.0)	24.4	1070.36 (4.5)	-0.8	1081.55 (4.9)
5.	Thapar	1181.90 (4.4)	11.5	1060.36 (4.4)	16.2	912.85 (4.1)
6.	Mafatlal	1297.41 (4.8)	11.1	1167.79 (4.9)	-1.9	1190.76 (5.4)
7.	Bajaj	1080.77 (4.0)	27.5	847.54 (3.6)	38.6	611.27 (2.8)
8.	Larsen & Toubro	687.68 (2.6)	22.7	560.23 (2.4)	17.2	477.88 (2.2)
9.	Modi	1188.98 (4.4)	7.6	1104.55 (4.7)	-0.8	1113.01 (5.0)
10.	M.A. Chidambaram	448.62 (1.7)	-4.4	469.27 (2.0)	-19.3	581.28 (2.6)
11.	A.C.C.	819.49 (3.1)	1.8	805.36 (3.4)	1.6	792.44 (3.6)
12.	TVS	775.34 (2.9)	19.5	648.82 (2.7)	7.6	602.72 (2.7)
13.	Shri Ram	948.23 (3.5)	17.5	806.94 (3.4)	-6.2	860.28 (3.6)
14.	Bangur	672.48 (2.5)	-7.5	726.86 (3.1)	3.0	704.41 (3.2)
15.	Hindustan Lever	1152.18 (4.3)	11.0	1037.89 (4.4)	8.9	953.32 (4.2)
16.	Walchand	576.45 (2.2)	9.7	525.28 (2.2)	0.6	522.28 (2.4)
17.	I.T.C.	1480.15 (5.5)	12.6	1314.52 (5.5)	64.0	801.44 (3.6)
18.	I.C.I.	659.08 (2.5)	-0.1	659.60 (2.8)	0.2	658.16 (3.0)
19.	Kirloskar	674.29 (2.5)	13.9	591.92 (2.5)	2.8	576.03 (2.6)
20.	Mahindra	620.48 (2.3)	11.9	554.25 (2.3)	3.8	534.10 (2.4)
Total		26706.41 (100.0)	12.7	23686.99 (100.0)	7.1	22112.23 (100.0)

Note: Bracket figures indicate the percentage share in total.

Table No. XIV.
Production of Consumer Electronics : 1981 and 1985 to 1988 (In Rs. Crores)

Consumer items	1981	1985	1986	1987	1988 (Esti- mated)	CARG(%) between 1981 to 1988	% share to total	1981	1988
Black & White TVs	88.1	358.2 (98.6)	396.5 (10.7)	581.0 (45.5)	836.0 (43.8)	37.9	10.3	13.3	13.3
Colour TVs	1.3	410.1 (153.0)	502.2 (22.5)	717.0 (42.8)	897.0 (25.1)	154.4	0.2	14.2	14.2
Radios	98.5	117.4 (14.5)	126.1 (7.4)	155.0 (22.9)	160.0 (3.2)	7.2	11.5	2.5	2.5
Tape recorders incl. two-in-ones)	27.0	88.6 (38.0)	138.0 (55.8)	178.5 (29.3)	227.5 (27.5)	35.6	3.2	3.6	3.6
Electronic clocks	2.0	13.9 (94.4)	21.6 (55.4)	75.0 (247.2)	75.0 (0.0)	67.8	0.2	1.2	1.2
Electronic watches	3.9	11.7 (39.3)	21.8 (86.3)	35.0 (60.6)	73.0 (108.6)	52.0	0.5	1.2	1.2
Other consumer electronic items	25.2	30.1 (-30.2)	60.7 (128.2)	78.5 (14.3)	131.5 (67.5)	26.6	2.9	2.1	2.1
total consumer electronics	246.0	1030.0 (75.3)	1275.0 (24.8)	1820.0 (42.7)	2400.0 (31.9)	38.5	28.7	38.1	38.1
total production of electronic goods	856.0	2660.0	3460.0	4720.0	6300.0	33.0	100.0	100.0	100.0

Note : Figures in brackets indicates percentage change over previous year.

Source: Financial Express, 24th May, 1989.

Notes and References

1. *Economic Surveys*, GOI.
2. *Mid-Term Appraisal of the Seventh Five Year Plan*, GOI.
3. *S.B.I., Monthly Review*.
4. *Report of the Department of Industrial Development*, Ministry of Industry, G.O.I. 1987-88 and 1988-89.
5. *Mid-Term Review of the Economy (1987-88)* (Mimeo) M. Adiseshiah.
6. *Production and Capacity Utilisation in 600 Industries, 1970-1980*, CMIE, Bombay.
7. *Seventh Five Year Plan (1985-1990)*, G.O.I.
8. S. Chakravarty, 'The Trap of The 'Good Life'. *Patriot*, April 20, 1989.
9. A number of news reports from *Financial Express*, *Economic Times* and *Business Standard*.

5. Agricultural Development and Policy

B.N. Verma

The period of the 80's and, particularly, the triennium ending 1988 for which performance of Indian agriculture is to be reviewed is at once marked by the severe drought (1987) and its after effects. Besides this, the mid-eighties found Indian agriculture sliding into a profound crisis marked by rising costs of cultivation, increasing dependence on expensive resources, growing regional imbalances and stagnant or erratic crop yields. There have been many manifestations of the crisis and its consequences as evident from the farmers' agitation in western U.P. which became the biggest political issue in that state, reports of the wayward behaviour of the soil, sinking water tables, worsening shortages of fodder and fuel and the growing misery of the poor in agrarian community.

Agricultural production in India dipped substantially in 1987-88 after three consecutive years of stagnation following 1983-84. The most startling conclusion that emerges from an analysis of recent official agricultural statistics and the mid-term appraisal is that during the eighties the growth in foodgrains production has been outpaced by the increase in India's population. This means that we are in the process of going back where we were 20 years ago and the spectre Malthus's grim prognosis is back with us. What is significant here is not just the lower rates of growth--indeed production may well pick up with good monsoon--but the fact that they have taken place on a new base corresponding to considerably higher costs of cultivation. Against this rather pessimistic backgroup the revised targets of agricultural production set forth in the Seventh Plan and on-going trends therein are to be reviewed and analysed.

In fact, any current performance and future prospect have close

relation with what happened in past. Before undertaking the task of reviewing current trends and future prospect in Indian agriculture it seems proper to start with a brief background of the behaviour of agricultural economy in recent past.

THE BACKGROUND

Agricultural growth in India during the past four decades of developmental planning may be characterised by the following overall trends observed in Indian agriculture during last four decades may be used as necessary background informations for explaining current behaviour of different agents of agricultural changes in recent years particularly during triennium ending 1987-88. These overall trends are:

- Aggregate crop output has grown at a much faster rate since independence than in the first half of the century. The average rate of growth during the period 1949-50 to the present has been around 3 percent a year compared to less than 1 per cent per annum in the previous fifty years. Though the overall compound annual growth rate of around 3 per cent has been satisfactory to some extent but much below the 4 to 5 per cent mark that has been deemed technically feasible and economically very essential. Further, in spite of the introduction of High Yielding Varieties (HYV) in the wake of green revolution, the overall rate of growth in Indian agriculture has not evidenced any dynamism and has remained almost constant.

- Quite interestingly a fall in the rate of area expansion under crops has been well compensated by the yield improvements of the crops

- Coming to the performance of individual cereals/foodgrains, the yield performance of the crops has not been uniform; on the contrary, it has been rather disparate. While crops like wheat have shown record yield increase; others, mainly the slow-growth crops like, coarse grains, pulses and oil seeds, have had very unimpressive yield performance. Further, rice, the premier crop, has not been able to have a dramatic increase in yield as in case of wheat except in some pockets and that also outside the traditional growing seasons/states.

- As in the case of crops, growth has not been evenly distributed over different states. Broadly, we have three categories of states on the basis of their growth performance. The first category of states (Punjab,

Haryana and Western UP) having exceptionally high agricultural growth rate, the second category (Andhra Pradesh, Maharashtra and J&K) having growth rate higher than national average (particularly during seventies). There are eight other states in the third category (namely Rajasthan, Orissa, W. Bengal, Bihar, Assam, East UP, Gujarat and Karnataka) comprising 55 per cent of total foodgrains area and witnessing a growth rate below the national average. The last category of states showing negative growth rates mainly during 1971-81 comprises states like Tamil Nadu, Kerala, Madhya Pradesh and Himachal Pradesh. The spatial variations in growth turns out to be more serious at district level. 100 districts out of 280 districts according to a study (Y.K. Alagh and Bhalla)¹ recorded a growth rate higher than 3 per cent a year but 110 others achieved less than 1.5 per cent per annum with reporting an absolute decline.

Growth in Indian agriculture has occurred with a high degree of instability. There is evidence of agricultural growth with increased instability in the post HYV period compared to earlier period.

Along with the overall trends in major growth indicators in Indian agriculture explained above, the trends in main policy considerations during different phases since independence may also be spelled out. Infact, the behaviour of growth indicators has been directly or indirectly the implications of these very policy considerations. India's post-independence agricultural growth strategy has evolved over three distinct phases. In the first, roughly covering the period of the first and second plan agricultural growth was taken as essentially the task of removing the basic socio-economic constraints by employing the instruments like land reforms, reconstruction of the village power structure, reorganisation of the rural poors into co-operatives, and better people's participation in planning. Unfortunately, land reforms and reconstruction of village power structure remained unfinished and cooperation has proved to be a failure on most of the fronts in many backward states. The data made available by various surveys and investigations viz the Agricultural Labour Enquiry, the Rural Credit Survey and the Farm Management Studies challenged even some of the basic assumptions underlying the strategy adopted during the first plan.

The second phase refers to the period of the third plan. During this phase the consideration which worked was that in agriculture which is a location specific phenomena having diversity in socio-economic and

agro-climatic conditions even at intradistrict level centrally sponsored uniform schemes and programmes of development cannot give desired results. It was with this consideration that area specific approach was adopted and main emphasis was given on programmes like "Intensive area agricultural programme" and the "Intensive Agricultural District Programme". These programmes also due to absence of grass root infrastructure and organisational uses could not be much effective.

The third phase may be identified predominantly by the phase of green revolution relying most on "seeds, water fertilizer" technology. This phase of policy which heralded the green revolution continued till the end of the Sixth Plan. The consequences of the policy mainly in terms of growing inequality of income distribution and regional imbalances are already before us. However, the most alarming consequence at the moment is highly unstable nature of agricultural growth which needs full attention.

GROWTH VS. INSTABILITY - THE DROUGHT FACTOR

Indian agriculture today in comparison to pre-green revolution period stands on a solid ground with a basic change in outlook and growth prospect. In recent years agriculture in India with wide application/adoption of HYV seeds, chemical fertilizer and secured irrigation has been modernised, with grand yield performance in the wake of Green Revolution. India has become almost self-reliant in foodgrains. Droughts in the year 1980 and again in 1988 have been faced rather boldly, largely with internal stocks, or with imports on a much lower-scale.

Unfortunately, along with this brighter growth performance and prospects the variations or instability in agricultural output is a phenomena which has occurred side by side in the current period. During 80's also the picture of growth performance in general has been badly blurred by the element of instability particularly on account of the serious droughts during this period. An elaborated analysis of the drought factor while explaining performance of Indian agriculture during 80's provide a realistic interpretations of the cross-currents of increase in area and yield on the one hand and severe set backs given by natural calamities like droughts and floods on the other. A comparative analysis of the data related to technology and input base of modern agriculture in India and their relation with variations in output as well

as rainfall data during pre and post Green Revolution periods in C.H.Hanumantha Rao's "Unstable Agriculture and Droughts"² amply indicate that the complementarity between inputs used and rainfall has become stronger. In other words agricultural production has been found becoming more sensitive to variations in rainfall. This is further confirmed by the related data during 80's i.e. during the period under review.

The elements of instability inherent in very nature and pattern of the growth of agricultural system in India have been manifested in most devastative 80's. The phenomenon of agricultural growth with a greater instability can best be illustrated by analysing growth and instability data during this period in a comparative framework. Table No.1 shows the inter-crop growth rates along with the degree of instability in terms of standard deviation in annual output growth rates during the period 1981-87. The years of 1980 and 1988 being abnormal years due to serious droughts have not been included in the period. In order to compare the emerging features of growth and feasibility of this period with the previous periods the same set of data for the period 1950-65 (the pre-green revolution period) and 1966-85 the post-green revolution period) have also been shown in Table 1.

A perusal of Table 1 clearly indicates that except in case of wheat the growth rates of other crops and groups of crops have considerably gone down during post green revolution period (1966-85) when compared to the pre-green revolution period. To elaborate further these trends when wheat output growth rate has increased from around 4 per cent per annum in the pre-green revolution period to over 5.5 per cent per annum in the post green revolution period, the growth rate of rice output declined from 3.3 per cent per annum to 2.4 per cent in the respective periods. For coarse cereals the decline in the growth rates was more dramatic. It's output growth ratio fell by around 60 per cent from the pre-green revolution periods rate of roughly 2.2 per cent to 0.85 percent. Pulses too recorded a sharp decline to the extent that their pre-green revolution growth rate was halved. In spite of these sharp declines foodgrains output as a whole maintained a growth rate well above 2.0 per cent in both the periods due to some compensating factors in operation. Most important among those factors is the increasing contribution of wheat and other rabi food crops.

Table 1 indicates the extent of instabilities also in growth rates of

various crops during a pre-and post green revolution periods. Appendix I further shows the amplitude of fluctuations in cases of other categories of crops. As indicated in Table 1 and also in Appendix I the amplitude of fluctuations for all categories of crops, except wheat have increased significantly in the post green revolution period (i.e. 1966-85) when compared to the pre-green revolution period (i.e. 1950-65). A comparative view of Table 1 and Appendix I also indicated that the increase in variability has been highest in case of oilseeds followed by coarse cereals and pulses which are grown largely under unirrigated and uncertain rainfall conditions.

The current trends of growth rates and amplitude of variations in individual crops as well as in groups of other crops during the period 1981-87 as reflected in Table 1 can be explained as (i) During this period when compared to the previous periods growth rates of rice seems to be picking up whereas that of wheat seems to be sliding down. Further, in the case of crops like oil seeds which have not experienced any significant technological breakthrough output growth rates have fallen steeply during first four years of the current period i.e. from 1981 to 1984 but has shown a pick-up in the production trend since 1985 onwards. In average it shows a re-equipping trend. So far extent of instability during current period is concerned, as indicated in Table 1 (individual year data) and also in Appendix I (average data) instability in almost all crops has either increased or has remained stable except coarse cereals and oil seeds in which cases it has somewhat downward trends in very recent years i.e. since 1985. A steady downward trend is evident in the growth rate of coarse cereals, also. Trends in production of pulses showing a downward trend (below 1 per cent growth rate) between 1981-1984 has picked up since 1985 but has shown again a dive in the year 1987 to go below 1 per cent level- Out of Kharif and Rabi foodgrains it is Rabi foodgrains which has an edge over the Kharif-foodgrains production during recent years also. Almost static trend in total foodgrains is maintained during the current period also.

SENSITIVITY OF OUTPUT TO RAINFALL VARIATIONS

C.H. Hanumantha Rao and others³ in their recent book entitled "unstable Agriculture and Droughts" have found that observed increase in variability in foodgrains and all crops output cannot be attributed to green revolution as such. It is attributable essentially to environmental and infrastructural conditions under which crops are

grown. The intensity of weather induced fluctuations in crops output is the combined result of the sensitivity of output to variations and rainfall and the variability in weather (rainfall) itself. Variability in rainfall is generally short term by nature and the sensitivity of output to variations in rainfall predominantly changes depending upon the nature of technology and inputs used and also upon the level of development in infrastructural facilities like irrigation. Thus, sensitivity or elasticity of output with respect to variations in rainfall is an important indicator of the impact of growth on instability. C.H. Hanumantha Rao has worked out the values of these elasticities for different periods before and after green revolution. The same exercise has been done to obtain the values for the current period i.e. 1981-87 in the present study. Table 2 shows degree of sensitivity (in form of elasticities) of output to rainfall variations for crops and groups of crops during 1981-87. Table 2 also shows the values of elasticities for the periods 1950-65 and 1966-85 i.e. periods before and after green revolution. A comparative view of the values of elasticities shown during different periods including current one gives an indication that crop output in general has been more sensitive to rainfall in the post green revolution period. This increasing trend in sensitivity is more or less continued during current period (1981-87) also. Taking the case of individual crops or group of crops it is very much evident from Table 2 for all the crops and crop groups except wheat that the degree of sensitivity of output to rainfall has increased (i.e. the values of elasticities have gone up gradually after 1965). In the current period crops like rice, coarse cereals and pulses have shown greater sensitivity to rainfall. Elasticity values for Kharif and Rabi foodgrains are available for the current period only. These values indicate that Kharif foodcrops show comparatively greater degree of sensitivity to variations in rainfall than the Rabi food crops. This seems to be somewhat natural because Kharif crops face more hazardous weather conditions than Rabi crops.

AREA/YIELD VARIATIONS AS EXPLANATORY FACTORS OF GROWTH/INSTABILITY

Area and Yield are the two components of growth in agricultural output. The variations in growth may occur depending on the type of area included in or removed from cultivation (viz marginal and less fertile land being more sensitive to rains if brought under cultivation may give rise to greater output fluctuations and vice versa). Variability

in growth may also depend upon similar or dissimilar pattern of change in area and yield viz instability in agricultural output increases if both area and yield move in the same direction whether positively or negatively, the instability on the other hand decreases if the movements in area and yield become dissimilar i.e. if they move in opposite direction. With a view to know whether instability in agricultural output is on account of variables in area or yield or due to their synchronous/non-synchronous movements an exercise of growth decomposition analysis on the line of C.H.H. Hanumantha Rao and others has been done for the current period (1981-87). The results of this exercise along with the related values worked out by Rao and others for different periods have been arranged in Table 3.

Table 3 clearly shows that for individual crops the relative contribution of positive correlated changes in area and yield to variability in output has increased significantly in the current period (1981-87). As further supported by the related figures shown in the Table for periods prior to and after green revolution i.e. 1950-65 and 1966-85 this trend in higher values of correlated change in area and yield growth rates started since inception of the green revolution and reached to a considerably higher level during 1966-85. These values of variability in area and yield along with the values of correlated changes of the two confirm that apart from increases in the variability in area and yield, the increased correlation between their movements is an important factor accounting for the rise in the variability of the output.

AGRICULTURAL GROWTH AND INSTABILITY IN REGIONAL PERSPECTIVES DURING 80'S

Table 4 shows both growth and instability data for different states of India during 60's in column one and during seventies (70's) as well as early eighties (80's) in column two. These two periods have been taken for a comparative analysis of emerging trends in regional perspectives. As according to the trend of growing regional imbalance in Indian economy the agricultural growth rates also ranged from negative (in case of Kerala and Tamil Nadu) to as high as around 6 per cent for Maharashtra and Punjab.

So far the states having accelerating growth rates are concerned A.P., M.P., Maharashtra and Rajasthan come under this category of such states. On the other hand H.P., J&K, Karnataka, Kerala, Punjab

and W. Bengal are the states showing deceleration in their growth rates during the two periods. Out of 17 states where two states namely Maharashtra and Andhra Pradesh have jumped from very low rates of growth to above average rates of growth (around 6 per cent and 3 per cent respectively) during late 70's and early 80's, three states (Haryana, Punjab and U.P.) have continued to experience above average growth rates and rest of the states experiencing above average growth rates during 1960's have come down drastically during seventies and eighties. Thus growth experiences of 80's indicate further regional concentration of output growth in Indian agriculture.

The state-wise instability data (i.e. std. deviation in annual foodgrains production growth rates) in Table 4 gives a clear indication of the states like Gujarat, Karnataka, Maharashtra, Orissa and Tamil Nadu where instability in foodgrains output has increased sharply. Table 4 further indicates a number of states like Bihar, Haryana, Himachal Pradesh, J&K, Kerala and Punjab which have shown a substantial decline in degree of instability in the growth of their agricultural output.

With a view to study a pattern or relation, if any, between growth and instability at inter-state level Table 5 has been designed. This Table shows cross-arrangements of states according to levels of instability and growth rate in their foodgrains output during 70's and early 80's. As indicated in Table 5 out of the 12 states experiencing deceleration in the growth rate of output, four states experienced a sharp rise in instability while six experienced a sharp decline in it. Similarly out of the four states showing acceleration in the growth of output, Maharashtra alone has experienced a sharp rise in instability whereas the remaining three states have not experienced any significant change in it. Thus Table 5 confirms absence of any correlation between growth and instability. This further goes to support the conclusion emerged earlier that instability in output is not caused by growth as such rather it has a relation with the environments and infrastructural conditions under which crops are grown.

GROWTH IN AGRICULTURAL OUTPUT AND INPUT-OUTPUT RATIO--HOW COSTLY IS THE RECENT TECHNOLOGICAL TRANSFORMATION?

Technically a growth analysis has two basic and related dimensions i.e. output and input. Unless growth performance in terms of input-

output ratio is examined the real growth issues are not emerged. This section on input-output ratio in Indian agriculture during 80's has been devoted to answer namely the question how costly is the recent technological transformation.

As indicated in Table 6 while total input cost (in terms of value of inputs used) increased at the rate of 3.7 per cent a year between 1980-81 and 1987-88 (at 1980-81 prices), values of output increased at the rate of 1.2 per cent a year during the same period. Productivity of inputs (measured in terms of index of values of output/index of value of input $\times 100$) declined by 6.2 per cent during the same period.

It is observed that while there is no stability in the values of agricultural output, which is observed from the above table (from the high degree of fluctuation in value of output and also from the foregoing analysis of instability) there has been a steady growth in value of inputs used. Values of output declined four times in a span of seven years. The main reason behind the decline is the fluctuation in monsoon conditions as well illustrated in sensitivity to rainfall analysis in earlier section. Output declines in a period of bad monsoon but value of inputs does not change so much. It is only the degree of increase that matters.

The Input Behaviour

Over the years there has been a significant change in the relative importance of various inputs. For instance, in 1970-71, 50 per cent of value of inputs used to be on account of feed of livestock and seeds. In 1985-86 this percentage came down to 30.8. Instead, share of chemical fertilisers increased from 10 per cent to 26.4 per cent, that of diesel oil increased from 2.2 per cent to 4.5 per cent, electricity from 1 per cent to 2.7 per cent and share of pesticides and insecticides increased from 1.7 per cent to 2.2 per cent during the same period. The incidence of cost increase would be further obvious if we now consider the increase in prices of some of the inputs significantly. Between 1970-71 and 1980-81, increase in price of fertiliser, pesticides, tractors, agricultural sprayers, lubricant oils, HSD, LSD and agricultural power rates increased by 142.7 per cent, 228.6 per cent, 190.3 per cent, 85.2 per cent, 179.9 per cent, 448.1 per cent and 217.6 per cent respectively. Between 1980-81 and 1983-84, prices had increased by 10.2 per cent, 29.6 per cent, 22.6 per cent, 12.4 per cent, 24.6 per cent, 48.4 per cent, 46.0 per cent and 26.0 per cent respectively.

It is thus obvious that the cost of modern inputs, or in other words, the cost of technological transformation has been significantly high. A question that arises is at what cost have we achieved the technological breakthrough in agriculture? Technological breakthrough is considered successful when it means that a greater production is achieved at a given input level and at a lower per unit cost. This has not happened in our case. One would also wonder whether the price policy has at all helped in keeping the cost of production under control and thus raising the net return of the farmers.

AGRICULTURE IS A GROWTH COMPONENT IN THE NATIONAL ECONOMY

In a predominantly agricultural economy of India the contribution of agriculture in her economic growth cannot be underestimated, but the role it plays in growth process in subsequent phases of economic development is crucial and needs a consideration. Working into the details of different growth models and development experiences of developed countries relevant conclusions can be drawn in Indian context regarding role/contribution of agriculture in the phase of development Indian economy is passing through.

In Ricardo's model the failure of agricultural output to fulfill the growing needs of an expanding population as a result of the operation of the law of diminishing returns set a limit to the growth of a free enterprise economy and led to the phenomenon of the decline in rate of growth. In modern terms, however, with lesser implications of diminishing return due to modern technology in agriculture emphasis is being laid on the importance of simultaneous development of agriculture and industry as highly complementary phenomena feeding and reinforcing each other. Further, the development experiences of developed countries like U.K., Japan and others evident a large change in the agricultural sector in the first phase of development paving the way for industrialisation.

The contribution of agriculture as growth component can be analysed and examined in terms of (i) product contribution, (ii) factor contribution, (iii) market contribution. It would be interesting to discuss how Indian agriculture has behaved on these fronts in recent past and particularly during 80's.

THE PRODUCT CONTRIBUTION

Product contribution is the share of a sector in the incremental national income. Table 1 shows the contribution of agriculture to the growth of the net National Product in terms of "the share of the growth of agricultural product in the growth of total product" during different plan periods. Table 7 shows the values of this indicator i.e. *para* at current prices.

Table 7 shows variations in the contribution of agriculture to the national product during 70's and 80's i.e. during the period constituting 7th Five Year Plans. It is clear from Table 7 that product contribution of agriculture to the growth of the aggregate net product has shown wide fluctuations (in terms of current prices). The fluctuation ranges from 51.28 to even (-) 4.8 (during drought hit period of 1986-88). This wide fluctuations or instability may be attributable to the fluctuating behaviour of agricultural and non-agricultural prices and also to the changing behaviour of the growth rates of the output of agriculture and non-agricultural sectors. Decline in the share of agriculture to the national product may be identified as a result of structural transformation only when the decline is of permanent nature and is a long term phenomena. But fluctuations in the share of agriculture as shown in Table 7 are short term fluctuations not confirming structural-transformation in the economy.

The Factor Contribution

The factor contribution refers to the surpluses created in agriculture sector and available for investment in the other sectors of the economy. Relative sectoral rates of growth, the sectoral capital output

The share of the growth of agricultural product in the growth of total product i.e. *para* has been calculated with the help of the following formula :-

$$\text{Para/p} = \frac{1}{1 + \frac{\text{pb}}{\text{pa}} \times \frac{\text{ra}}{\text{rb}}}$$

Where, p = Net National product.

pa = Product of the agricultural sector

pb = Product of the non-agricultural sector.

ra = rate of the growth of agricultural sector

rb = rate of the growth of non-agricultural sector.

ratio and the distribution of savings between the different sectors are important factors influencing the transfer of resources from one sector to another sector. In fact, the flow of income from one sector to another is the outcome of changes in sectoral terms of trade and sectoral distribution of the incidence of taxes. Keeping in view change in inter-sectoral flow of income, marginal propensity to save and for that reason marginal inducement to interest are the two Keynesian growth factors which play a key role in generating income and creating thereby growth potential in the economy. Then what is most important in this context is the direction of inter-sectoral flow of income. If it is in the direction from the sector having low propensity to save and invest to the sector having high propensity to save and invest the income flow will lead to acceleration of growth in the economy.

The Sectoral Terms of Trade

Table 8 shows sectoral terms of trade in form of parity price indices in India. The time series of parity price indices cover the current period upto the year 1987-88. The sectoral terms of trade as usually defined refer to the relationship between the indices of agricultural and industrial prices based on a common base year. Generally, parity price indices are prepared with the help of agricultural price index and price index of manufactured articles. The purpose is to show the ratio between prices paid and taken by the farmers. To serve this purpose more effectively the relative price indices of agricultural output to respective inputs have been preferred. For this purpose, the terms of trade data preferred by M.V. Nadkarni has been used. It takes the relative prices of agricultural output in relation to total inputs, industrial inputs and other inputs. The data on terms of trade as prepared by Nadkarni is given in Table 8.

It is observed that relative price of output with respect of price of total inputs was in favour of agriculture only during 1972-73 and 1973-74. Since then, it has been always unfavourable to agriculture. The situation has worsened during the period 1980-81 to 1983-84. However, it improved slightly during 1984-85, though it remains significantly unfavourable for agriculture. In relation to industrial inputs the situation is worse. It was in favour of agriculture during the initial years of the 70s and terms of trade improved significantly in favour of agriculture between 1970-71 and 1973-74. However, it deteriorated very badly there after and in 1975-76 the terms of trade index moved-

down to as low as 68.8 against 134.5 in 1973-74. In 1979-80 the situation improved significantly when the index rose to 92.7. However, it declined to the level of 63.3 in 1981-82 and since then it increased to only 77.8 in 1984-85.

The situation with regard to other inputs is not as bad as the situation with regard to industrial inputs. During 1972-73 to 1974-75 the terms of trade was in favour of agriculture. Since then it has turned unfavourable, but the index fluctuated between 94.1 and 99.8. Nadkarni attributes the sharp decline in terms of trade after 1975-76 to two factors, namely (i) the sharp increase in dependence of industrial inputs like fertilisers, pesticides and diesel oil, and (ii) hike in petroleum prices.

Prof. Nilakantha Rath⁴ has, however, suggested that terms of trade can be explained elaborately only when it is worked out for each major produce, for separate states and in terms of both input prices and consumer expenditure.

It is not possible to give details of the movement of terms of trade for all the crops and for all the states under two different definitions as worked out by Prof. Rath, but what emerges from the study is that one needs to really take a dis-aggregate view of the movement in terms of trade. It is also obvious that there is something seriously wrong with the present method of fixing agricultural support prices. The present policy is to fix a single price for a single crop for the whole country which is not the right approach. A proper approach is to fix different prices for a crop for different regions and' or different agro-climatic regions, if not for different states. Further, it is also necessary to take into account the cost difference of a crop in different regions.

The Net Income Flow into Agriculture--Through Fiscal Operation

A transfer of resources as a result of the fiscal operation of the Govt between the different sectors is a function of the aggregate burden of direct taxes on a sector and the govt. outlay in that sector. A careful examination of the Table 9 makes it quite clear that the gap between the public outlay on agriculture and the direct tax burden on agriculture has been considerably large during 80's i.e. during 1981-87. Though direct taxes in terms of land revenues has been increasing but very very marginally and its net burden tending to fall down in view of rising prices and productivity in agriculture. Public outlay on agriculture on

the other hand is evident rising very fast comparatively. The net implication of the phenomena is that there has been net flow of income into agriculture from other sectors through fiscal operation-during 80's.

Capital Formation and Investment in Agriculture

With a view to study and examine as what happened to income flowing into agriculture from other sectors the data on capital formation and on the level of investment in agriculture have been arranged in Table 10 (the sources of data are duly mentioned in the footnote of the Table).

Quite interestingly in spite of considerable rise in prices of agricultural commodities in recent years and net flow of income in the sector through fiscal operation as discussed above, the volume of gross capital formation in this sector has fallen down as indicated in Table 10. The reason of income flow not ultimately resulting in capital formation in Indian agriculture may be lion's share of surpluses going to large households or money lenders who find it more profitable to invest in trade than on capitalist farming because of enough gain out of rack renting under semifeudal system of farming.

The Market Contribution

As pointed out earlier the market contribution of agriculture operates through the process of interaction between different sectors and the creation of linkages both forward and backward between them. These inter sectoral linkages through channels of market network has openings in the terms of (i) Supply of foodgrains from agriculture to other sectors (particularly industry) mainly in the process of labour absorption in those sectors. (ii) Intersectoral dependance also in terms of their mutual input requirements. (iii) Generation of effective demand from agriculture for industrial and other products. In cases of all the above openings of inter sectoral linkages it is the price thread which is common and it is policy considerations on price front which determine the direction and level of market contribution of agriculture or any other sector. In this section the behaviour of agriculture in recent years (during 80's) on different fronts of market contribution as explained above has been analysed and explained. As pointed out earlier it is the price front both domestic and international where the real net gain or loss or stress and strain on supply/demand sides of the sectors con-

cerned is reflected.

Agricultural Prices and Inflationary Pressure During 80's

The Economic Survey for 1988-89 notes with satisfaction that there took place only 5.00 per cent increase in wholesale price index upto January 21 in the current financial year against 10.21 per cent rise in the corresponding period of the previous year. But it fails to analyse the serious nature of price rise this year. Analysis of the contribution of different groups of commodities in general price rise clearly shows the threat. The striking feature of the current price rise is that in terms of its composition food articles alone have contributed to 64.02 per cent of the overall increase in W.P.I. * till January 21, 1989. This is perhaps the record highest contribution that food articles have made in the aggregate inflation rate in recent times (See Table 11). Though the magnitude of general price rise is certainly somewhat moderate in comparison to previous year but excessive inflationary pressure on food front poses a great threat.

What is still more disquieting is the most severe pressure of rise in price of foodgrains among food articles--the basic items of consumption. As indicated in Table 12 the rate of inflation for rice is 11.66 per cent, for wheat it is 10.12 per cent and for pulses it is as high as 31.08 per cent. As evident from Table 11 the current prices of almost all foodgrains have shown highest magnitude during the period of last five years i.e. from 1984-85 to 1987-88.

It will not be out of the way to point out here that foodgrains which constitute the basic food content of the weaker sections have every possibility of their further price rise. The current supply position of foodgrains is tight and it is likely to continue to be so on the one hand, on the other governments anti-poverty programmes (mainly employment programmes) worth Rs.1700 crores are likely to put more money in rural pockets and may result in rising effective demand for foodgrains. Unless real supplies of foodgrains is in time with the rise in demand further inflationary spiral will be build up on food front.

Wage -Income -Cost Nexus

Rise in prices of foodgrains has its own implications. In fact, it has

* W.P.I. - Wholesale Price Index

circular relation with some of the growth variables viz wages, income and cost. These variables are interlinked in such a way that a causal change in them ultimately affects the living conditions of the labour class and production prospect of the cultivating class. Along with the rise in prices of foodgrains and key inputs viz seed, fertiliser etc. the labour cost i.e. wages also increase. The money wage rate have increased differently in different states which is shown in Table 13.

It is observed in Table 13 that during the 15-year period, i.e. 1970-71 to 1984-85, there has been significant increase in money wages for male workers. Similar increase is also observed in the case of female workers, although wages given to female workers are usually lower. Ratio of wages given to female workers and to male workers varied between 57.18 in Tamil Nadu to 92.7 in Bihar.

Though there has been wide variation in money wages amongst states, the rate of increase has been almost uniformly high in all the states. This, of course, does not mean that the agricultural labourers have stood to gain. Growth rate in real wages, thanks to increase in prices, has been extremely low. Growth rate in real wages in agriculture between 1970-71 and 1984-85 varied between 0.01 per cent in Punjab to 3.44 per cent in Andhra Pradesh. Growth rate in real wages has been comparatively high in agriculturally undeveloped states like Bihar, and Orissa. In the case of Haryana, Punjab, U.P. and H.P. the growth rates are respectively 0.85 per cent, -0.01 per cent, 1.82 per cent and 0.71 per cent.

In fact, increase in money wages has added to the increased cost of production, but the benefit that could have accrued to the agricultural labourers, has been wiped off by increase in prices of consumer items. Index number of consumer price for agricultural labours (1960-61 = 100) shows that index number of food articles increased by 131.4 per cent between 1970 and by 57.2 per cent between 1981 and July 1988. General consumer price index number for agricultural labourers increased by 125.9 per cent and 58.5 per cent respectively during the corresponding periods. This is all India figure and incidence of increase varies amongst the states.

Agriculture and Export Earnings

Contribution of agriculture through export earnings of the farm

products also comes under market contribution of agriculture to the overall growth of the economy. The impact of agricultural exports on economic growth can also be visualised in terms of their linkages effects. Their forward linkages effects may lead to an increase of investment in processing agricultural exports while the backward linkages effects would induce investment in the production of fertilizer and agricultural machinery.

Table 14 shows the value of total agricultural exports and values of the exports of some important individual agricultural crops during the period 1981-87. These fluctuations are very much in conformity with variations in weather and other factors influencing the prospects of agricultural crops in general. Exports of agricultural products have a low income elasticity of demand in world markets and as such their linkages effects are not so strong and significant. Even then the immediate gain of agricultural exports earnings cannot be underestimated.

The Seventh Plan Perspective and the Vision Reality Gap

One finds a wide gap in the vision the Draft outline of the Seventh-Five Year Plan provides about agricultural development in the opening *paras* in the chapter on strategy in the first volume and the reality which has emerged in the process of detailed plan formulation as well as implementation. This gap in intentions and action on the part of the Planning Commission with respect to the priority given to agriculture sector becomes more clear when one tries to go into the details of the development model of the 7th plan. Basically the same model with a change in stress has been adopted. In the name of change in approach to the strategy of agricultural development a few thrust areas have been identified for action in agriculture. (i) special Rice Production Programme in the Eastern Region, (ii) National Oil Seed Development Project, (iii) National Watershed Development Programme for rainfed agriculture, (iv) Development of small and marginal farmers and (v) social forestry.

There are disparate programmes each addressed to specific problem or to the achievement of a specific object. These programmes do not constitute a well co-ordinated policy thrust giving an impression of scattered efforts without any system based strategy.

Unfortunately, this vision reality gap is not only with respect to objectives and strategy on the theoretical plane rather with respect to target and achievements in subsequent years of the Seventh Five Year Plan also.

With a view to prepare agricultural development programmes to be included in the Seventh Plan a working group was appointed by the Ministry of Agriculture. The major policy change suggested by the group was the discontinuance of the present practice of preparing a uniform scheme for the entire economy. This group suggested that let centre announces broad programmes and the states have opportunity of preparing their own projects to suit their own individual conditions, needs and resources.

Another basic policy measure suggested by the group was the Government should switch over from the present subsidy oriented approach to a service oriented approach. According to the group key services like power and irrigation facilities, credit, marketing research and extension facilities are needed to be service oriented.

Though above suggestions of the group were of some practical importance but were predominantly administration oriented than developmental. Group said nothing about the change in the broad policy framework of agriculture and remained satisfied with suggesting improvements in the administration of agricultural programmes. Undoubtedly Working Group paid limited attention to the problems like distortion in the cropping pattern, sharpening of inter-regional disparities in rural incomes and the deficiencies of a centralised system of planning of agriculture in a vast country like India with that much of diversity in agronomic conditions. But what was needed was to give a new orientation to planning by changing the role of agriculture in the development process so that not only increased agricultural production is obtained but the growth impulses in the economy are generated. Unfortunately, the chapter in the plan document on agriculture stands in complete isolation from the other chapters with little indications of any well thought out link between agriculture and solution of the problems of poverty as well as unemployment. Though some linkages effects of agricultural development on industries are there in the plan document but even these linkages of general nature are scattered over different parts of the plan document and do not form a single consistent system of policy measures and action programmes.

Though the "Approach Paper" of the Seventh Plan raised hopes of a major change in the development strategy when it stated that the "Plan must emphasize policies and programmes which will accelerate the growth of foodgrains production, increase in employment opportunities and productivity". But in spite of the keenly felt needs for a change in development strategy and hopes raised by the approach paper the desired change in the growth strategy and growth model has not materialised.

Policy Perspectives - Towards Eighth Plan

Contributing around 40 per cent of the GDP and employing 67 per cent of the country's labour force agriculture stands as the key sector of Indian economy and the policy designing agricultural strategy does not matter much only from food self-sufficiency point of view rather it governs the cross currents of developmental forces in the entire economy. Our past experiences amply indicate that it is predominantly agriculture based growth strategy in India which may work well. The undesired implications of the growth model based on ambitious industrialization has already frustrated us. The much talked trickle-down mechanism has not materialised.

Even the strategy adopted in agricultural sector in the wake of green revolution has resulted in lopsided unstable agricultural growth giving rise to skewed income inequality in rural India. Production oriented agriculture has miserably failed on distributive fronts. The neglect of institutional reforms to a greater extent has constrained the technological diffusion in majority of the backward states.

The agricultural policy adopted during previous plans has given rise to the pattern of agricultural development characterised by three types of inequalities--interregional inequality, inter-crop inequality and inter-personal inequality.

The magic of modern cultivation has remained confined to areas/regions endowed with irrigation and other institutional facilities. It has failed to touch rain-fed and dryland agriculture. This is mainly because the modern technology evolved in the wake of green revolution is a highly irrigation specific technology. In fact, the obsession with HYV seed fertilizer technology has overshadowed the urgency of evolving alternative technology suited to the rain fed and dry farming systems.

Technological break through limited to specific crops only (mainly to wheat and partly to rice) has resulted in plenty of surplus in some crops and painful shortages in others. While we have overall growing surpluses of wheat and rice we have to depend heavily on imports of vegetable oil and sugar due to insufficient production of oilseeds and sugarcane. The performance of pulses has also been unimpressive to the extent that its per capita availability has been almost halved during the last two decades.

With the growth enclaves or growth islands of Punjab, Haryana and western UP on the one hand and agriculturally stagnating eastern region on the other we have growing regional contrast giving an impression of agriculturally two faces of India - one dynamic and prosperous and other stagnating with utter poverty and sufferings. The recent drought experience has alarmed against the threat of growing instability along with growth. In spite of impressive growth performance the fluctuating fortune of Indian agriculture on account of almost alternate drought and flood in one or another part of the vast India insists on an agricultural strategy which may result in growth with considerable stability.

Thus, the aspects discussed above suggests a shift in elements and emphasis while designing agricultural policy -- particularly in process of formulating eighth plan. The difficult experiences of the seventh plan in terms of budget deficits, adverse trade balances, continuously rising capital output etc. cannot be over-looked and in that background a fresh look of the country's development strategy and the role of agriculture therein seems to be quite essential. The re-orientation of agricultural strategy in the wake of formulating eighth plan needs three equally important goals to be set in for the next phase of planning i.e. stability, equity and efficiency. Efforts towards achieving these three goals would need emphasis on the development of physical infrastructure like irrigation and land development especially in the less developed regions. Particularly irrigation policy should emphasize on equity in water distribution, construction of field channel and drainage channels in canal area, ground water development and above all on flood control in the eastern region. Further, development of flood/drought and pest resistant high yielding varieties of mainly paddy and slow growth crops like oilseeds and pulses. Above all, emphasis on institutional changes like effective implementation of land reforms consolidation of holdings,

strengthening of credit and market infrastructure etc. are also needed.

Formation of regional committees on agro-climatic zone basis, and the conference of chief ministers to discuss the implementational aspects of land reforms are the steps taken by the Planning Commission which create a hope of better approach to agricultural development in the next five year plan. However, more important is the final shape of the strategy the plan ultimately adopts.

Table 1

**Growth Rates and Instability (Std. Deviation in Growth Rates)
Production in India of Foodgrains in India.**

Gr = Growth Rate. Ins = Instability.

Years	Rice		Wheat		Coarse Cereals		Total Cereals		Pulses		Kharif	
	Gr.	Ins.	Gr.	Ins.	Gr.	Ins.	Gr.	Ins.	Gr.	Ins.	Gr.	Ins.
1981	2.31	17.09	4.69	11.20	1.69	11.75	2.68	10.69	0.46	17.26	2.46	15.
1982	2.71	17.49	5.48	10.50	1.30	11.43	2.84	12.20	0.62	16.96	2.54	14.
1983	2.74	17.94	5.48	10.50	1.30	11.43	2.84	12.20	0.62	16.96	2.49	15.
1984	2.53	18.84	5.65	8.25	1.09	10.76	2.63	12.68	0.17	17.08	2.41	15.
1985	2.29	18.01	5.38	7.98	1.64	10.26	3.34	11.87	1.11	15.11	2.69	15.
1986	2.68	18.21	6.76	8.20	1.02	10.45	3.58	11.62	1.28	16.2	2.79	14.
1987	2.06	17.98	5.28	8.00	1.86	11.48	2.68	12.88	0.92	12.85	2.58	14.
1950-55*	3.34	9.99	4.02	11.52	2.17	8.01	3.17	7.83	1.16	12.00	--	--
1966-85*	2.60	13.92	6.40	11.15	0.85	13.20	3.07	10.81	0.55	16.26	--	--
1981-87	2.47	18.06	5.64	8.91	1.31	10.83	2.94	12.31	0.77	16.06	2.56	15.

Notes-

(i) * Dated for the periods 1950-65 and 1966-85 have been taken from the book "Unstable Agriculture and Droughts" by C.H. Hanumantha Rao and others, Vikash Pub. House, 1988.

(ii) The growth rates have been estimated by Rao from the following modifies functional from $\log Y_t = A + B + \log W_t$, where W_t is the Crop specific rainfall index with it's normal value as 100. The growth rate during 1981-87 in the present study have also been estimated following the same procedure.

(iii) The term Instability shows the std. deviation in annual output growth rates.

Table 2

Trends in output Elasticity with respect to Rainfall.

Crops Years	Present deviation in production due to 1 per cent deviation in rainfall from its normal level									
	Rice	Wheat	Coarse cereals	Total cereals	Pulses	Kharif food grains	Rabi food grains	Total food grains	Oil feeds	All crop
1981	0.87	0.11	0.53	0.68	0.70	0.78	0.20	0.67	0.22	0.52
1982	0.84	0.07	0.54	0.65	0.71	0.78	0.16	0.66	0.22	0.51
1983	0.84	0.04	0.46	0.64	0.67	0.82	0.16	0.64	0.23	0.49
1984	0.81	0.08	0.51	0.67	0.70	0.81	0.21	0.67	0.30	0.50
1985	0.86	0.05	0.54	0.50	0.64	0.85	0.07	0.52	0.63	0.45
1986	0.80	0.04	0.58	0.48	.72	0.89	0.20	0.68	0.58	0.42
1987	0.88	0.7	0.62	0.52	0.58	0.82	0.05	0.46	0.75	0.58
1950-65*	0.4657	0.0980	0.0407	0.1747	0.2350	-	-	0.1939	0.1912	0.1652
1966-85*	0.6650	0.1613	0.5746	0.5256	0.5172	-	-	0.5240	0.3910	0.4050
1981-87*	0.8428	0.1557	0.54	0.5914	0.6742	0.8214	0.1502	0.6142	0.4185	0.4957

Note: (i)* Data for the periods 1950-65 and 1966-85 have been obtained from the book "unstable agriculture and droughts" by C.H. Hanumantha Rao and others, Vikash Pule House, 1988.

(ii) The values of output elasticity with respect to rainfall have been estimated for 1981-87 period following the functional form used by Rao. i.e. $\log Y = BT + c \log wt$ where wt is the rainfall index.

Table 3

Decomposition of Instability in Annual Crop Output Growth Rates During the Post-Green Revolution Periods, All India.

Crops and Crop Groups	1966-85				1981-87			
	Percent of var. in annual output growth rate due to				Percent of var. in annual output growth rate due to			
	Var. in area g.r.	var. in yield g.r.	Correlated changes in area and yield g.r.		Var. in area g.r.	Var in yield g.r.	Correlated changes in area and yield g.r.	
Rice	4.97	66.59	28.44		3.828	70.432	26.14	
Wheat	22.40	45.58	32.02		26.518	58.21	15.624	
Coarse Cereals	9.20	57.19	33.61		9.944	54.816	35.26	
Cereals	7.63	60.02	32.35		5.368	66.19	28.428	
Pulses	10.74	67.91	21.35		11.398	62.468	26.134	
Total Foodgrains	8.49	59.01	32.50		6.812	69.37	23.414	
Oil Seeds	28.50	60.50	31.00		23.922	62.7	24.63	

Note: Variation in output due to variation in area and yield growth rates have been worked out for the period (1981-87) with the help of the decomposition analysis as done by C.H. Hanumantha Rao & others (1988) the related equation is $(ViGo + ViGa) + V(Gr) + 2Cov(Ga Gr)$ where Ga, Gr and Go are the growth rates in area, yield and output, respectively.

Table 4

Agricultural Growth and Instability in different states of India during 70's and 80's.

GR States Ins.	Growth Rates		Instability	
	During 70's	During 80's (1981-87)	During 70's	During 80's (1981-87)
A. Pradesh	0.93	3.16	13.6	14.0
Assam	2.91	1.90	11.3	11.0
Bihar	2.32	1.25	17.0	23.4
Gujrat	4.56	2.07	35.7	32.2
Haryana	6.25	3.90	15.0	19.7
Himachal Pradesh	5.27	0.80	11.8	14.3
J & Kashmir	6.44	2.31	10.0	14.2
Karnatka	4.17	1.03	22.4	19.3
Kerala	2.90	0.68	4.9	7.4
M.P.	0.16	1.95	21.5	21.6
Maharashtra	0.23	6.23	27.4	23.9
Orissa	2.64	1.59	26.0	22.8
Punjab	9.70	5.92	4.5	9.1
Rajasthan	0.85	1.07	29.6	29.4
Tamil Nadu	0.87	0.64	24.2	19.2
U.P.	4.21	4.32	15.9	15.8
West Bengal	1.62	0.54	16.3	15.1
All India	9.73	2.70		--

1. *The Term Instability refers to under deviation in annual growth rates.

Table 5

Cross-arrangements of states according to levels of instability and growth rate in foodgrains output (1981-87)

Instability 1981-87	Growth Rate (1981-87)		
	High growth rate above 3%	Medium growth rate Below 1.5%	Low GR 1.5% to 3%
High std. dev. above 20	Maharashtra	Gujrate, M.P. Orissa	Rajasthan Karnataka Tamil Nadu
Medium Std. dev. 15-20	Haryana U.P.		W. Bengal Bihar
Low Std.-dev. below 15	A.P. Punjab	Assam J & K	Himachal Pradesh Kerala

Source : Based on Table I.

Table - 6

Value of input output and productivity of inputs in Indian Agriculture:
1980-81 to 1987-88 (1980-81 prices)
(Unit: Rs. Crores)

Years	Value of output	Index of output value	Value of input	Index of input value	Productivity of inputs (Index)
1980-81	45,565	100.0	11,681	100.0	100.0
1981-82	48,089	105.5	12,363	105.3	99.7
1982-83	47,181	103.5	12,673	108.5	95.4
1983-84	52,422	115.0	13,366	114.4	100.5
1984-85	51,547	113.1	14,153	121.2	93.3
1985-86	51,691	113.4	14,610	125.1	90.6
1986-87*	50,140	110.0	15,190	130.0	84.6
1987-88*	48,650	106.8	15,720	134.6	79.3
Annual increase	1.2	---	3.7	---	-6.2

Source: Basic Data on Indian Economy, August 1988, by CMIE.

Note: * CMIE estimates.

Table - 7

Contribution of Agriculture to the growth of national product during 70's and 80's

Plan	Indicators	Average ratio of non-agricultural income (Pb/Pa)	Ratio of average rate of growth of non-agricultural income to agricultural income.	Share of the growth of agricultural product in the growth of total product (Pa'ra/P) (In per centages)
1970-74 (IV Plan)		0.95	1.5-	51.28
1975-79 (V Plan)		1.52	2.64	20.88
1980-85 (VI Plan)		1.59	2.02	29.1
1986-1988 (VII Plan)		1.93	1.01	-4.8

Source:- Calculated on the basis of the formula given in the footnote at the next page with the help of the appropriate data collected from issues of Economic Survey.

Table 8

Index-Numbers of terms of trade of Agriculture in India with respect to Industrial inputs vis-a-vis other inputs? During 70's & 80's.

Year	Relative price of Output, with Respect of price of		
	Total inputs	Industrial inputs	Other inputs
1971-72	99.1	103.1	98.3
1972-73	102.7	113.8	100.2
1973-74	106.7	134.5	101.4
1974-75	98.7	79.3	105.9
1975-76	90.7	68.8	99.8
1976-77	92.2	76.4	98.8
1977-78	91.3	82.1	95.1
1978-79	91.0	81.1	95.3
1979-80	93.1	92.7	93.2
1980-81	87.5	73.2	95.1
1981-82	81.9	63.3	94.1
1982-83	83.9	66.1	95.7
1983-84	89.6	73.6	99.8
1984-85	90.0	77.8	98.2

Source: Taken from an article "Crisis of Increasing Costs in Agriculture. Is there a way out?" by M.V. Nadkarni Economic and Political Weekly, September 24, 1988.

Note : "Chemical fertilisers, pesticides and diesel oil."

Table 9

Net Resource flows into Agriculture on Govt. Account during 80's.

(In Rs. crores)

Period	Indicators	Average annual direct tax burden farm sector	Average annual public expenditure in the farm sector	Average annual net flows of capital on Govt's account.
1980-81 to 1983-84		217	4553	4336
1986-87		478	4373	3895
1987-88		485	4613	4128
1988-89		634*	4788	4154

Source: (i) Reports on currency and Finance R.B.I. various issues.

(ii) *Economic Survey* various issues.

* relates to Budget estimates.

Table 10

Share of Agriculture in Gross Domestic Capital (In Rs. crores)
formation during 80's.

Years	Indicators	Gross Domestic Capital Formation in the economy.	Gross domestic capital formation in Agriculture.	Share (in %) of Agriculture Gross domestic capital formation
Col 1		Col 2	Col 3	as % of Col 3
1980-81		30270	4670	15.43
1981-82		35413	4556	12.87
1982-83		33699	4569	13.56
1983-84		35792	4761	11.30
1984-85		37789	5036	13.33
1985-86		41438	4703	11.35

Source : *Economic Survey* - Various Issues.

Table 11
Contribution to changes in Wholesale Price Index
(Period between end-March and third week of January for each year)

	1988-89	1987-88	1986-87	1985-86	1984-85
ALL COMMODITIES	100.00	100.00	100.00	100.00	100.00
FOOD ARTICLES	64.02	25.01	26.90	46.61	NA
Cereals	13.63	11.19	3.14	16.80	0.30
Pulses	17.51	7.38	-4.14	8.03	9.50
Fruits/Vegetables	3.84	-2.18	8.11	22.87	5.20
NON-FOOD ARTICLES	-12.70	23.52	27.88	-21.69	NA
FOOD PRODUCTS	-3.19	17.25	32.04	24.14	NA
Sugar/Khandsari/gur	-6.79	7.43	2.93	26.18	8.50
Edible Oils	-7.44	6.56	23.27	-0.13	0.50
ADMINISTERED ITEMS	22.83	17.53	-14.42	28.03	17.30
MANUFACTURED PRODUCTS	36.98	42.38	60.10	47.31	NA

Source: Economic Survey (Various Years)

Table 12
Rates of inflation for Food articles and Products.

Rice	Wheat	Pulses	Sugar	Edible Oils
11.66	10.12	31.08	11.34	-8.66
7.95	8.37	21.08	-2.00	24.80
6.34	5.75	-11.88	2.04	31.60
4.03	7.62	7.42	17.31	-10.28
-3.67	-3.67	7.56	10.93	5.59

Source: Computed from data in Economic Survey (Various Years)

Table 13
Money Wage Rates (Male Workers) in Agriculture : 1970-71 to 1984-85.

(Rs. / day)			
States	1970 - 71	1984 - 85	% increase (Annual average)
Andhra Pradesh	2.70	10.41	10.1
Assam	3.96	12.87	8.8
Bihar	2.64	9.98	9.9
Gujarat	3.07	12.58	10.6
Haryana	6.64	19.55	7.9
Himachal Pradesh	4.11	12.55	8.3
Karnataka	2.45	7.31	8.1
Kerala	4.61	16.86	9.7
Madhya Pradesh	2.15	8.53	10.3
Orissa	2.84	9.46	8.9
Punjab	6.19	8.42	10.1
Rajasthan	3.69	18.13	7.7
Tamil Nadu	2.53	8.83	9.3
Uttar Pradesh	2.72	10.54	10.2
West Bengal	4.04	10.59	7.1

Source : Taken from an article 'Agricultural Wages in India' A. V. Jose, *Economic and Political Weekly*, 25 June 1988.

Table 14

Principal Exports

Commodity	Unit of Qty.	1985-86		1986-87		1987-88	
		Qty.	Value	Qty.	Value	Qty.	Value
Agricultural and Allied Products							
1. Coffee	Mill Kgs.	....	3018.3	....	3422.0	....	N.A.
2. Tea and Mate	Mill Kgs.	98.9	264.9	73.4	296.7	68.7	263.2
3. Oil Cakes	'000 Tonnes	205.6	626.3	192.4	476.8	197.3	592.4
4. Tobacco	'000 Tonnes	806.9	134.0	1044.6	189.8	684.2	173.6
5. Cashew Kernels	Mill Kgs.	80.5	169.6	89.3	185.3	76.4	134.6
6. Spices	'000 Tonnes	37.1	225.1	43.0	327.6	36.1	306.7
7. Sugar & Molasses	'000 Tonnes	89.0	227.8	97.0	279.0	83.1	309.3
8. Raw Cotton	'000 Tonnes	37.9	15.8	3.1	1.4	2.3	0.8
9. Rice	'000 Tonnes	235.7	68.2	202.3	204.7	73.0	95.5
10. Fish & Fish Preparations	'000 Tonnes	245.0	196.3	248.3	197.3	371.6	324.6
11. Meat & Meat Preparations	'000 Tonnes	87.5	409.0	110.6	539.0	97.9	525.1
12. Fruits, Vegetables and Pulses (excl.cashew kernel & processed fruits & juices)	'000 Tonnes	....	73.8	....	75.5	....	85.5
13. Miscellaneous processed foods (incl. processed fruits and juices)	Value	.....	124.0	....	155.8	....	65.9
	Value	....	82.4	....	75.5	....	703.3

Source: *Economic Survey, 1988-89.*

Appendix - I

Years	Rabi Foodgrains		Total foodgrains		Oil Seeds		All Crops	
	Qr.	Ins.	Qr.	Ins.	Qr.	Ins.	Qr.	Ins.
1981	3.05	4.59	2.48	13.75	0.61	15.85	2.43	11.44
1982	3.57	4.16	2.64	13.11	1.87	16.28	2.73	10.68
1983	3.73	4.09	2.60	13.24	0.61	16.57	2.59	10.77
1984	3.17	3.91	2.40	13.60	1.30	18.00	2.37	10.99
1985	3.73	3.22	3.19	12.17	3.67	17.62	3.17	10.46
1986	4.20	2.96	3.26	12.58	3.22	16.28	3.28	9.80
1987	3.64	3.64	2.09	13.82	3.85	17.50	2.96	11.62

(Contd.)

(Contd. Appendix-1)

1962-65*	---	---	2.88	8.10	3.04	9.30	3.02	6.27
1966-85*	2.00	13.32	2.81	11.14	1.75	16.92	2.72	9.19
1981-87	3.58	3.73	2.79	13.26	2.11	16.87	2.93	10.82

Note:-

(i) * Date for the periods 1950-65 and 1966-85 have been taken from the book "Unstable Agriculture and Droughts" by C.H. Hanumantha Rao and others, Vikash Pub. House, 1988.

(ii) The growth rates have been estimated by Rao from the following modified functional form $\log Y_t = A + Bt + C \log W_t$, where W_t is the crop specific rainfall index with its normal value as 100. The growth rates during 1981-87 in the present study have also been estimated following the same procedure.

(iii) "The term Instability shows the std. deviation in annual output growth rates."

Notes and References

1. Alag^h, Y.K. and Bhall G.S. *Performance of Indian Agriculture - A district-wise analysis*, New Delhi.
2. Rao, C.H. Hanumantha, S.K. Ray and Subba Rao *Unstable Agriculture and Droughts*.
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4. Rath, Neelkanth - Prices, Cost of Production and terms of trade of Indian Agriculture, *Indian Journal of Agricultural Economics*, Oct - Dec 1985.

PART - II

6. The State of the Economy: and Immediate Tasks for the New Government

K.V. Raghunath Reddy and R.C.Dutt.

The new Government has inherited an economy which, in spite of the much vaunted improvement in the rate of growth, is basically unsound. Even the growth is unstable, but, more importantly, the direction of growth does not meet the imperatives of development in a country of widespread poverty and unemployment, and is contrary to the cherished value of self-reliance. The economy to-day is characterised by a strong inflationary pressure, continued devaluation of the Rupee, serious foreign trade imbalance, precarious foreign exchange reserve, and increasing foreign influence in the domestic economy in the shape of growing volume of foreign investments and foreign technological collaboration, much of which is repetitive in nature, for the production of even simple articles of consumption like tooth-pastes, soap and shaving cream.

A Report of the Economic Advisory Council recently circulated in Parliament by Government, while describing the state of the economy, draws attention to certain problem areas where action is needed. It also discusses in broad terms the objectives to be aimed at, specially in these problem areas. In this Paper the nature of the problems that have arisen, and in particular the distortions which have crept into the economy in recent years, are discussed, followed by specific suggestions for action on the basis of their priorities.

THE PROBLEMS AND DISTORTIONS-A GENERAL ANALYSIS

The rationale of planning and its marginalisation

The most noticeable feature of the economic policies pursued in the eighties was progressively to marginalise planning, and encourage

market forces in the name of competition, domestic and international. Both competition and market forces have their roles to play, but they should play their roles only within the parameters set by the plan on the basis of the nationally accepted objectives of development. They cannot be allowed to determine the nature of development, confining it, for instance to a small fraction of the population, in a country with a population as large as 800 million, of whom at least 35 per cent are below the poverty line, and another 50 per cent, though not technically so, suffer from chronic scarcity and want. Nor can market forces and competition be allowed to deny the country its cherished objective of economic independence. To allow multilateral institutions like the World Bank and the IMF to dictate the economic policies that India should adopt is too high a price to pay for the doubtful benefits of unfettered competition and market forces.

It was in order to set the priorities of investment so as to attain the objective of self-reliant development with distributive justice to all sections of the population that India opted for planning, and declined to rely on market forces alone. In the context of scarcity of resources, specially of capital, market forces would tend to divert the resources available to areas which provided the maximum of profit, and deny them to other areas, however essential they were from the points of view of self-reliance and justice. Such market led development could not eradicate widespread poverty, covering about 300 millions of the population.

Naturally, such canalisation of resources to priority channels did not hold out promises of large profits, except perhaps in limited areas. Public sector was therefore to be the main vehicle of the plan. It was to occupy the "commanding heights" of the economy from which it was to determine the pattern of investments in the entire economy. Private sector could continue, but within the "discipline of the Plan."

Such a regime of planning was based on two pre-requisites. One was Government's control over the bulk of the savings available to the country, either from domestic or from external sources. The other was Government's control over the private sector to ensure that it functioned within the broad parameters and priorities set by the Plan. The former was necessary to enable Government to finance the public sector in the large priority area which included both the infrastructure and the area of mass consumer goods. The latter, namely, control of

the private sector, was equally necessary to ensure that scarce resources were not wasted in low priority investments, thus denying resources to those of a higher order of priority.

Planning has been marginalised in recent years by a progressive relinquishment of both these types of control. Pressure of the private sector for "incentives" has led, on the one hand, to a larger share of the scarce capital resources being made available to it (the private sector), and therefore a correspondingly smaller share to Government for use in the public sector: This has manifested itself in two ways. First, there has been a demand for reduction in rates of taxes, specially of direct taxes. Secondly, there has been a demand for subsidies to benefit, not necessarily the poor consumer or the small producer, but the large capitalist entrepreneurs. While this has eroded Government's control of the bulk of the capital resources of the country, control of the private sector on the other hand, to ensure its compliance with the plan parameters, has been eroded by an abdication of such control in the name of "*libertisation*."

It is true that the system of industrial control had become unnecessarily complex, and that it had little relevance to plan priorities. There was certainly a case to rationalise controls, but there was no case to free the private sector from the discipline of the Plan. Nor, in the case of capital resources, was there justification not only to reduce the rates of taxation but to utilise the bulk of the private savings mobilised by Government Financial institutions in the interests of the private sector.

Distortions

The loss of control over the bulk of the available resources, partly on account of poor mobilisation of resources by Government and partly because controls over the private sector have been dismantled, has led to lop-sided development and introduced several distortions in the economy.

Production for elites = a Dual Society

First, the bulk of the production of consumer goods and services having been appropriated by the private sector, their production is governed by the motive to maximise profit, not by the desire to satisfy

needs, however intense. And since this criterion can be met only by the comparatively affluent sections of the community who have the purchasing power to back their demands, the emphasis has been on the production of luxury goods and services. This has resulted in what is known as a Dual Society in which a small section of the population - about a 100 million out of 800 - are catered for, leaving the bulk of the population stagnant. Thus, while economic growth has not eradicated poverty in any significant measures, disparities of income and wealth have certainly increased.

"Anti-Poverty" measures

It is, perhaps, the realisation that bulk of the population are being left out of the mainstream of economic activities that has given rise to a spate of "anti-poverty measures". These measures are employment-oriented. They may produce some assets, but they do not, and with the possible exception of IRDP projects, are not even expected to generate sufficient surplus to make the projects self financing. They certainly alleviate suffering arising out of poverty, and are welcome for that reason, but they are not really anti-poverty measures in the sense of being able to eradicate poverty in a sustained manner. Individuals and families may be lifted temporarily above the poverty line by the employment created by these measures, but they cannot be sustained in that position unless the investments in these measures are repeated year after year. There can be no sustained basis of income above the poverty line unless that income is integrated in the mainstream of the productive effort of the community.

Elite production = not employment-oriented

One of the reasons why production of sophisticated luxury articles is of little benefit to the poor is that it is more capital than employment-oriented. This means that a certain rate of growth does not result in a corresponding increase in employment. It is, therefore, not a matter of surprise that in spite of the increased industrial growth claimed for the eighties the private organised industrial sector which produces the bulk of consumer goods showed an increase of only 0.02 million, from 7.40 million in 1981 to 7.42 million in 1988. (Source : Centre for Monitoring Indian Economy, Bombay, quoted by Dr. Arun Ghosh in his article "Mystery of a declining capital - output ratio" in *Economic & Political Weekly*, dated 18.11.89). With an increase of about 2 per cent

in the annual workforce this only increases the volume of unemployment.

Import-intensive production

A second characteristic of the emphasis on elite consumption is that the articles and services of this nature being high in import content, this type of growth places a heavy reliance on imports. To sustain this growth "import liberalisation" becomes inevitable, and this inevitability being linked with the level of production becomes rigid. Once this linkage is established the country is faced with the dilemma, as it is at present, of either maintaining a level of import it cannot afford, or of facing a cut in the level of production with consequent hardship and unemployment.

Instability of Growth

While the narrow demand base of elite production, confined to 100 million, cannot for long sustain the growth rate of a population of 800 million without further increases in income disparities, the high import requirements has a similar effect, for the strain it places on the balance of payments. This strain cannot be sustained indefinitely or even for long, and cut in imports becomes inevitable. The effect of these two features is already reflected in the poor rate of industrial growth in the first two quarters of the current financial year, for which the over-all rate of industrial growth is now estimated at about 4 per cent as against a rate of a little over 6 per cent in the Sixth Plan and an average of 8.5 per cent in the first four years of the Seventh Plan.

Fall in Savings rate.

A third feature of the present type of development, which in the long run is definitely anti-growth in nature, is the tendency for the savings rate to fall. By increasing the propensity of the affluent sections of the community to consume, development of this type reduces the capacity to save of those in the household sector who can afford to do so. This has been reflected by the fact that there has been a fall in the rates of savings in the eighties. The percentage of gross domestic savings to gross domestic products at current prices, generally referred to as the rate of gross savings, which rose to 23.2 in 1979-80, fell to 21.6 during the Sixth Plan, and to 20.1 in the Seventh Plan (upto 1987-88). For the

year 1987-88, the rate was 20.2. Similarly, the net savings as a percentage of net national product which was 16.4 in 1979-80 fell to 13.9 in the Sixth Plan and to 11.9 in the Seventh (upto 1987-88). For the year 1987-88 the rate was 11.1. A falling rate of savings is hardly consistent with continued increase of the growth rate.

Public sector dislodged from "commanding heights".

The failure of the public sector to occupy the commanding heights and thereby set the pattern of investments in the entire economy is reflected by the fact that the Seventh Plan, apart from investments in Power, Petroleum and Coal, provided for an allocation of only Rs.19,708 crores in large and medium industry in the public sector. As against this, the private sector investment, which was mainly concentrated on large and medium industry, had an allocation as high as Rs. 54,236 crores. The result was that while public sector industries languished for want of funds, and sufficient finances were not available for urgent social needs, such as primary education and even for safe drinking water for the villages, capital was plentiful for five- star hotels, luxury automobiles and Coloured Television sets.

Capitalist path of growth.

If planning was intended to be a device to direct the growth of the economy to attain certain social objectives, such as self-reliance, eradication of poverty and reduction of disparities of income and wealth, this amounted to a failure of planning. It was a surrender to the capitalist path of growth, and to the imperatives of such growth, however unfair or unjust they might be.

Concentration of Economic Wealth and Power.

An important policy principle so surrendered is that contained in the Directive Principles of our Constitution against concentration of wealth and economic power. The imperatives of capitalist growth lead inevitably to concentration not only because of economies of scale but because market competition favours those already well-established. Concentration, however, negates competition, and more importantly distorts income distribution. The worst feature of concentration, however, is, and this is a real danger, that accumulation of wealth, and consequently of, economic power, threaten to distort democracy itself,

first, by exercise of undue influence on the decision-making authorities, and secondly, by vitiating the democratic process with money-power. The latter has been a subject of widespread discussion in our country in recent years and hardly needs elaboration.

Inflationary Pressure.

The capitalist type of growth adopted in recent years has given rise to several serious problems, some of which are immediate in nature, while others have long-term consequences. An important problem of first variety is the inflationary pressure it has generated. The injustice caused by inflation is generally recognised, even if it were from the narrow electoral point of view. It is recognised that inflation helps the producer and the trader to amass wealth, often unaccounted. Another section of the community, who though they do not benefit directly by inflation, are influential enough to have their interests protected by having their salaries, wages and even pensions indexed. The great bulk of the poor, however, have no such protection. It is, therefore, generally agreed also that for the poor inflation amounts to blatant transfer of resources from them to the rich.

It is, on the other hand, not sufficiently realised that inflationary pressure in a developing country is intensified, if not initiated, by the demands made by the private entrepreneurs for "incentives" as a condition precedent to growth. In such a society where the claims on the limited resources available are varied, and where these include essential needs which, however, are not immediately profitable, such as Education, Health, Minimum Needs Programmes *et al*, any indulgence of the rich in the name of incentives is bound to create a revenue expenditure imbalance. This is what has happened in India. The demand for the reduction of taxes, specially those whose incidence is on the rich, such as progressive direct taxes, or whose incidence affects profitability, as certain excise and custom duties do, limits tax revenues of the State. Added to this is the widespread evasion of taxes, specially by persons of influence. Mobilisation of resources suffers in consequence.

Internal Debt

On the expenditure side, on the other hand, demands for subsidies, much of which benefits the affluent producers adds to the imbalance.

A position was thus reached in the eighties when the balance from current revenues became, for the first time, negative. This meant that the revenues of the Central Government were unable to meet even the current non-development expenditure. Government was forced to resort to borrowing to meet even those items of development expenditure which, however desirable and even essential, promised no immediate profit. Such borrowing was, however, no remedy, for interest charges went up until it became the highest item of expenditure in the budget for 1989-90, higher marginally than even Defence expenditure. This added to the imbalance, led to deficit financing which in turn generated inflationary pressures. Obviously, this state of affairs cannot be allowed to continue.

Reliance on Exports

Another problem which arises out of the heavy import content of the goods and services for elite consumption is reliance on exports. Exports have an important place in a modern economy in the present inter-dependent world, for no country however large and however varied its resources, can be self-sufficient. It is of special importance in developing countries which have special requirements for exports to diversify their industries. The exports needed to earn foreign exchange to finance these import requirements are sufficient to engage the best efforts of a country in a world marked by protectionism. the policy of *import substitution* pursued earlier was intended to moderate this import dependence. Unfortunately, this policy has not only been abandoned but a line of domestic production adopted which has a continuing need to import raw-materials in different proportions for its sustenance. This has increased our import dependence.

Import dependent export effort

In an effort to maximise exports Government in recent years have been misled to resort to what may be called import-dependent export effort. Many units based on foreign investments, multi-nationals or otherwise, have been licensed and allowed liberal imports on the assurance that they would export the bulk, if not the whole of their production, and thus earn sizeable net foreign exchange. These assurances have not been fulfilled in many cases. Detailed studies have shown that there are numerous instances where more foreign exchange

has been spent on imports than earned by exports. Indeed, as a general proposition it would be correct to hold that established industries, such as leather, gems and jewellery, and light engineering have been responsible for much of the increase in the volume of exports actually achieved, rather than sophisticated industries with foreign investments. There is, therefore, a strong case for a study in depth of the performance of these import-dependent export units set up with foreign collaboration, and an assessment of their real potentiality to earn net foreign exchange. The present position of allowing foreign exchange to be drained in the name of earning foreign exchange cannot be allowed to continue.

Balance of Payment crisis

The foreign exchange position under discussion has indeed reached crisis proportions. It threatens dislocation of the present level of production and of the growth rate in the short term, and of dependent development in the long term. Continued devaluation of the Rupee in an attempt to promote exports has not averted this crisis. On the other hand, it has made imports expensive, adding to the inflationary pressure. It has also turned the terms of trade against the country by making it necessary to export a larger volumes of goods than before to import a given quantity of foreign goods. The foreign trade imbalance, however, continues, and has placed the country's foreign reserves under heavy strain. In rupee terms, the foreign currency assets fell by Rs.358 crores in 1987, by a further Rs.684 crores in 1988-89, and by as much as Rs.1709 crores in the first six months of 1989-90. According to the latest RBI bulletin the foreign currency assets as in September 1989 reached the low level of Rs.4986 crores, hardly enough to cover imports for a month and a half.

Foreign Debts

In an attempt to balance the deteriorating balance of payments position without seriously dislocating the import-intensive production potential created in the country, more and more foreign debts have been contracted. The aid element in these foreign liabilities in the shape of grants or soft loans having shrunk, most of the debts have been contracted at high commercial rates of interest. The burden has further increased in rupee terms with the falling value of the rupee. The exact volume of foreign debts is a matter of estimate which has varied. It is,

however, agreed that the debt service ratio, that is the percentage of debt service charges to export earnings has exceeded the safe level of 20 per cent, and has reached 25 if not 30 per cent.

Debt Trap

More foreign debts to meet the deteriorating balance of payments position is, however, no remedy. More foreign debts mean more service charges, and therefore greater strain on the balance of payments. It creates a vicious circle, and leads ultimately to the dreaded Debt Trap, and to the surrender of economic independence to be bailed out by the multilateral capitalist dominated institutions like the World Bank and the IMF.

Sociological Consequences

More perhaps than the economic problems it has given rise to is the sociological harm that the present type of development has done. Jawaharlal Nehru had warned us repeatedly against the acquisitive type of society, but this is precisely what has been created. Competition has its place to ensure business efficiency, but unrestricted competition leads to unethical, exploitative practices. A consumerist society has been created among the elites and those who aspire to enter the ranks of the elites. Glamorous advertisements of the "good things" of life which the Television carries have fired the imagination of many and have kindled their determination to possess them, by means of fair or foul. The evil of dowry, the burning of brides and criminalisation of various types have followed. The idealistic fervour of the days of the freedom struggle has been replaced among the elites by the desire "to live well". On the other hand, the frustrated poor, the unemployed and the underemployed, have lost their hopes in the present order of things, and are falling victims to obscurantism, communalism, linguism and regionalism in the belief that these negative concepts hold the key to the future. And of course, there is no want of political power brokers who hope to rise to positions of influence by taking advantage of this weakness.

Industrial Sickness

In the race for acquisition, various malpractices, and even worse, various illegal and anti-social practices, have sprung up in the fields of

trade and industry. An instance of the former is reflected in the growing incidence of industrial sickness. This is a phenomenon which has assumed alarming proportions in the eighties. As against 23,740 industrial units (including small scale units) that were sick with outstanding bank credit of Rs.1744.2 crores in 1980, there were as many as 1,59,938 at the end of June 1987 with outstanding bank credit of Rs.5737.88 crores. Out of the latter, that is units sick in June 1987, there were as many as 1712 which were large or of medium size, and they were responsible for outstanding bank credit of Rs.4195.63 crores.

It is not resources alone in the form of bank credit that are wasted by industrial sickness. The human suffering caused in a poor country with widespread unemployment by the loss of jobs cannot be ignored, nor can the losses arising out of the value of output foregone, and the excise and other taxes unrealised can be overlooked. And yet, much of the sickness arises out of causes that are not only avoidable but are in fact manipulated by the owners of the sick units. Sickness is a convenient way of evading taxes, and even more of passing on the burden of capital expenditure to the public exchequer.

Anti-social activities

There are of course more blatant types of corruption, black money, tax evasion and even criminalisation of politics, which has its origin in the private sector, though it has found willing accomplices in other sections of the community. There has indeed been a spurt of such anti-social activities in recent years on a scale not experienced before. These evils should certainly be fought by enforcement authorities, but enforcement alone would be unable to eradicate them as long as their mainsprings are fed by socially acceptable practices in the name of competition.

IMMEDIATE PROGRAMME FOR NEW GOVERNMENT

An Action Programme - The Priorities

The problems listed in this Paper, and several others could be added to them, are a plateful. It is neither fair nor practicable to expect that the new Government could set about immediately to correct all the distortions that have crept into the process of our economic devel-

pment in the last two decades and a half and even earlier. There needs to be an order of priority, but the action taken on this basis must not only indicate Government's earnestness, but must set clearly the direction in which Government intend to proceed. It is suggested that two areas need to be tackled first. They are the Plan, and the Public Sector as its principal vehicle.

Change in the Nature of Planning

As has been noted, the Five Year Plan has lost its character. Instead of guiding the process of development the Plan has become a list of the proposed government investments for the five years, and an estimate of what the private sector could achieve in this period with appropriate policy formulations. The control sought to be exercised earlier on the pattern of economic development by an expanding public sector and by direct control over the private sector has now been abandoned. The public sector, confined to infrastructural areas, subserves rather than influences the private sector which dominates the rest of the economy. At the same time, direct control of the private sector has been dismantled in the name of liberalisation, leaving it free to determine as it likes the pattern of investments, and therefore of development.

This is indeed the capitalist path of development. The argument in its favour is that it ensures a high rate of growth which will in due course trickle down to the poor. Even if growth is not caught up in the contradictions mentioned earlier of a narrow demand base, scarcity of foreign exchange, or a falling savings rate, is the trickle down sufficient to meet the aspirations of the millions of the poor to rise above the levels of their existing poverty? This is the question that Government must answer categorically.

A New Industrial Policy Resolution

One of the first tasks should, therefore, be for Government to make a comprehensive policy statement, preferably in the form of a Resolution, which will bring up to date the Industrial Policy Resolution, 1956, and reconsider the Industrial Policy statements made since. The resolution should spell out the respective roles of the public and the private sector, define self-reliance in industrial development, outline Government policy towards foreign aid, foreign debts, foreign techno-

logical collaboration and foreign investments, and state clearly the objectives and limits of government control of the private sector.

Role of the Public Sector

The public sector should not be confined to the infrastructural goods and services. It has an important role to play in the area of mass consumption goods, whether it plays this role directly or with the help of co-operative and small scale units. This is a sector which does not promise high profits, and in which the private sector may not be greatly interested.

Ancillaries

Another role of the public sector, not sufficiently emphasised at present, should be to develop small scale ancillary units. While it is not possible for small-scale units to compete with large-scale production, except in specialised areas like handicrafts which require human skill, there is a large field open to the small units, provided they are given the know-how, to produce and meet the varied requirements of the large units for goods, like small spare parts, and services like catering, tailoring, *et al.*

Role and Limits of Private Sector: The Control System

The role and the limits of the private sector also need to be defined. While the proposed resolution can define this role only in broad terms, and can emphasise the need for the private sector to function within the discipline of the Plan, this needs to be followed up by action to amend the present control system. While liberalisation to the extent that the private sector is released from unnecessary bureaucratic controls is welcome, it does not mean that the private sector should be released from the priorities of investment which should be quantified in the Plan itself. The main function of the plan to channelise resources to approved priority channels, and to prevent misinvestment, must be restored. There is a strong case for a comprehensive review of the existing system, and its replacement by simple but significant controls linked directly with plan objectives.

While administrative rules and regulations can, however, ensure only broad compliance with Plan objectives, there is a need also to

ensure that private sector undertakings are not managed or mismanaged in the narrow interests of those who control the management. The possibility of private undertakings being so mismanaged is real, for the shareholdings of those responsible for management are often only a small fraction of the total shareholding. Those responsible for management thus, having little stake in the companies they manage, are more interested in extracting the maximum benefits for themselves from the companies than looking after their long-term interest.

Role of Directors Nominated by Government Financial Institutions

This possibility of mismanagement needs to be guarded against. It can easily be done because Government financial institutions often have substantial shareholdings or interests in the form of long-term loans in the private undertakings for which they nominate one or more directors to the Boards of the Companies. Unfortunately, the opportunity thus provided is not adequately availed of at present. Superannuated persons, often drawn from the private sector, are generally appointed to represent the financial institutions on a number of such private undertakings on the ground of their management expertise. Such persons, however proficient they may be in management, look upon these appointments as insecure, and have hardly any interest in keeping a watchful eye on the affairs of the companies concerned. Nor is any serious attempt made to make such appointments purposeful by systematic briefing.

This position must change. Government financial institutions should be instructed to appoint mainly their career managers as nominee directors, brief them fully about the norms that the companies should adopt, and hold them responsible for lapses that occur on account of their inadequate watchfulness.

Audit of Private Sector Undertakings

Another institution that needs to be more adequately used than at present for the healthy growth of the private sector is that of audit. The present arrangement by which company management appoint the auditors who are expected to conduct a critical review of management performance is on the face of it unsound. An alternative arrangement needs to be considered by which appointment of auditor is made by an independent authority. It need not necessarily be made by Govern-

ment or by any other State agency. Such appointments can be made, for instance, by an independent authority like the Institution of Chartered Accountants. What is necessary is that the appointing authority should be entirely independent of the managements whose performances have to be audited. It would also be desirable for the scope of the audit being determined from time to time by the Comptroller and Auditor General.

Self-Reliance

The country has departed considerably from the concept of self-reliance which was a guiding principle of our earlier plans. It has been noted already how our foreign debts are mounting, foreign exchange reserves falling and a debt trap looming ahead on account of export-import imbalance induced by import liberalisation. In an attempt to meet this imbalance foreign debts are sought to be supplemented by an open invitation for foreign equity investments, and by foreign technological collaboration, often with foreign multi-nationals, to improve export prospects.

Dependent Development

While foreign trade imbalance can be reduced somewhat in the short term by a stricter scrutiny of imports, eliminating the non-essential items, the danger of dependent development which the present policy involves can be dealt with only in the long term. This danger arises from two sources:

- (i) Development of import-intensive industries without any at import substitution, and
- (ii) indiscriminate foreign investment and foreign technological collaboration which concedes important economic decision making powers to foreigners.

While incorporating self-reliance as a guiding principle of economic development, the proposed Policy Resolution must incorporate Government's policies in these matters. Import substitution, not indiscriminately but to the extent economically feasible in the present Indian context, must be accepted as a principle of policy and acted upon. Similarly, the scope of foreign investments and also of foreign technological collaborations should be defined. While these

may be desirable in the new fields of technology, foreign investments should be restricted to the priority fields approved by the Plan. Foreign technological collaborations should also be so restricted with the additional conditions that they are not repetitive in nature and that provisions are made for a real transfer of technology.

Indigenous R & D

Foreign technological collaborations which have increased significantly in numbers in recent years have often by-passed indigenous R&D, instead of feeding it. This can prove a set-back to local R&D, whose scale in any case has to be substantially expanded if India's industries have to be modernised. It should be noted in this connection that Indian R&D is at present confined to Government and the public sector, the contribution of the private sector to it being almost nil. India cannot afford short term profit of this type at the expense of the long term benefits of R&D. India's modernisation, it should be appreciated, depends more on her own efforts than on foreign technology being pumped in from outside.

Revenue-Expenditure Imbalance

Apart from policy declaration a matter which needs the immediate attention of the Central Government is to restore the balance between revenue and expenditure. This is necessary not only to avoid deficit financing which generates inflationary pressures, but to find adequate resources for the public sector. This balance can be restored only in two ways, namely, (i) by mobilising further resources, and (ii) by reducing expenditure to the extent possible.

There is scope in both these directions. The tax burden on the rich which has been reduced in recent years can be increased without the incidence of the taxes hurting unduly the less affluent. An area of taxation which has been left out, though this is in the State sphere, namely, agricultural income, may be brought within the tax net. What is more important perhaps is that tax collection can be improved. The large tax arrears of the rich in particular can be reduced by determined action on the part of the revenue authorities without undue consideration of the status of the rich and of the political consequences of such action.

Similarly, on the expenditure side, there is room for the subsidies to be reconsidered. Many of these benefits the rich, and can be withdrawn without hurting the poor. There is certainly a case for reviewing the entire system of subsidies. Besides, in recent years the growing influence of the private sector has introduced a certain lavishness in the functioning of government. While Gandhian austerity of functioning from mud huts may not be practicable for ordinary mortals, there is no reason, on the other hand, to swing to the opposite extreme of five star culture and luxury limousines.

These two items of increasing revenue and reducing expenditure, if successfully dealt with will undoubtedly relieve pressure on government resources and reduce, if not eliminate the need for deficit financing. They may not, however, provide sufficient funds for an expanding public sector, if the public sector is to occupy the commanding heights of the economy. For this it is necessary to divert a greater part of the private savings than at present to the public sector. There is no reason why the private savings mobilised by government financial institutions like the IFC, IDBI, LIC, UTI, ICICI should, as at present, be utilised to finance almost exclusively the private sector projects. A good portion of these savings can and should be used for the public sector by these institutions aiding the public undertakings.

The recent practice adopted of the public sector being allowed to issue bonds is a step in the right direction. The present limits of the bonds, however, set by the Plans are unduly low. The Plan allots the bulk of the private saving to the private sector. This needs to be revised in subsequent plans, and higher allocations made for the public sector.

Public Sector Management

If the public sector is to be made the principal vehicle for planned development, as it should be, it is a matter of the highest priority to improve continually the management of the public sector to enable it to attain the highest possible level of operational efficiency. It is futile to enter into a polemical argument and maintain, however rightly, that operationally the public sector is no less efficient than the private sector. This is by no means enough.

The two most serious impediments to public sector efficiency are (i)

interference, mostly informal, by politicians, bureaucrats and others in authority in the day to day administration of public undertakings, thus denying them their much needed autonomy, and (ii) inadequate attention to manpower development. These weaknesses, specially the first, have been generally recognised, and numerous committees have been appointed in the past to suggest remedies. No long-term solution has, however, been found, and the weaknesses persist.

It is not possible to enter into a detailed discussion here of these two weaknesses themselves, or of the possible remedies. It needs to be appreciated, however, that these weaknesses cannot be cured by mere exhortation. Institutional arrangements need to be made, and a built mechanism created to deal with them.

Autonomy and Informal Interference

Interference in the autonomy of public undertakings arises not so much on account of perversity of those in authority as by the logic of a poor competitive society characterised by widespread unemployment. It is the pressure brought to bear on persons in authority by those seeking undue advantage from the public undertakings that set the pattern of "interference", which is then utilised by the former for personal benefits also. This can be met only by institutional arrangement which would make such interference difficult, if not impossible. It cannot be met by mere exhortation.

Manpower Development

Manpower development is another matter that needs immediate attention. Two broad features have to be reflected in manpower development schemes which also need to be institutionalised. These are: (i) a scheme of appointments and promotions openly outlined and impartially implemented which alone can provide the motivation for good work and, (ii) security of tenures which is very important if public sector managers are to work without fear or favour, and in particular if they are to resist the undue interference of those in authority.

Without going further into details it is suggested that a review should be undertaken on the lines indicated above to deal specifically with the two problem areas referred to.

Income, Prices and Profits Policy

Finally, another matter which needs attention if the benefits of growth are not to be vitiated by mal-distribution of the fruits thereof is formulation of an Income, Prices and Profits policy. It is appreciated that a policy of this nature would be difficult to frame, and still more to implement in an economy that is not fully planned. Nevertheless, it is necessary to outline the parameters within which incomes, prices and profits can be allowed to fluctuate, to ensure distributive justice.

Conclusion

The foregoing analysis of the state of the economy and the suggestions made thereon may be regarded by capitalist ideologues to have a socialist bias. Indeed, it has, but that is no objection to it. In the context of political democracy and with growing consciousness of the people, those denied justice will not wait for benefits to trickle down to them from the capitalist path of development.

Nor is the facile generalisation valid that socialism has failed, and with it planning and public sector too, as evidenced by the events in Eastern Europe. Such an argument will not stem the rising tide of discontent of the deprived sections of the population. It should be realised that what has failed is neither planning nor public sector, but authoritarianism and bureaucratic over-centralisation. It is true that several widely-held propositions of socialist transformation of society have proved erroneous, but so have many of the assumptions of classical capitalist economies. Capitalism has undergone radical changes since its introduction in the late eighteenth century, and it is no matter of surprise that socialist practices are now undergoing changes. Every living ideology must be open to change. It is a sign of life, rather than of decay. It is as premature for the capitalists to rejoice over the demise of socialism as it was for the socialists to prognosticate the collapse of capitalism, specially following the Great Depression of the early thirties.

The tasks are urgent if the country is to be saved from unbalanced development which can only lead to discontent and strife. There is no alternative in a poor, developing country, specially in a country like India which has inherited a highly unequal social and economic order, but to protect the poor from the tyranny of the market. Equality in law is now enough, for in an unequal society such equality only breeds

further social inequality. There is no alternative to planned development, provided the plan reflects the will of the people, and not of the planners alone. This is not doctrinaire idealism, but a realistic approach to the facts of life.

7. Employment Generation and Labour Productivity in Agriculture

S. Kataria

Unemployment and low labour productivity are to my mind the major challenges facing the Indian economy today. Labour is the source of all wealth and as long as this resource available in abundance in our country remains neglected, neither sustained nor equitable growth of the economy is possible. Maximum generation of employment opportunities along with increase in labour productivity are thus not only required for sustained growth but also equitable growth and removal of absolute poverty.

In this paper, attention is focussed on employment generation and labour productivity in the agricultural sector. Emphasis on labour productivity in the agricultural sector seems quite obvious both because of the relatively much lower level of labour productivity in agriculture sector and also because even today 2/3rd of the labour force is still employed in agriculture. No significant improvement in overall productivity of labour can be expected as long as labour productivity in the agriculture sector remains depressed. (See Tables 1 and 2)

Besides the gap in labour productivity between L.D.C's including India and D.C's including densely populated Japan is much wider in agricultural sector than in the manufacturing sector. This points to a great potential for increasing agricultural production.

Table 3 giving a comparison of labour productivity in the agricultural sector for developed and developing countries.

Emphasis on employment generation in the agricultural sector

however needs a little explanation. The sector is already saddled with surplus labour which in turn is said to be one of the causes of its low productivity. A transfer of labour from this sector is often considered a precondition for increase in labour productivity. Historically too in developed countries an increase in labour productivity was achieved largely by a steady transfer of labour out of low productivity traditional agriculture into the industrial sector. Again to quote World Bank Development Report 1982, 'Transfer of labour from agriculture, where the amount of capital per worker and average productivity is relatively low to industry and services, is the key to raising incomes and output'. Such a conclusion is based on the premise that developing countries today have to follow the development path pursued by developed countries. However it became apparent quite early that the population transfer approach was going to be very difficult to follow in L.D.C.'s. With labour force growing fast through rapid population growth, even a proportional decline in agriculture's share of labour force of the same order as achieved in developed countries over a comparable period, would still imply rapidly growing numbers in agriculture. What actually happens to the share of labour force in agriculture has been shown to depend upon the relation between demand factors reflected in relative income elasticities of demand for agricultural & non-agricultural products and supply factors--reflected in the ratio of growth of labour productivity in the agricultural and non-agricultural sectors. This share declines with income growth only if the ratio of growth of labour productivity in agricultural & non-agricultural sectors exceeds the ratio of income elasticities of demand for the products of two sectors. The above condition was satisfied in the historical development experience of developed countries leading to steady and significant decline in agriculture share of labour force during their modern economic growth---so much so that this has been taken as a characteristic of growth process. In L.D.C.'s this condition may be satisfied in the long period but not necessarily in the medium term future. Hence, in the near future, no significant decline in share of labour force in agriculture is expected. The distribution of labour force between different sector of the Indian economy from 1951 to 1981 confirms it. Given this what is the magnitude of the employment problem in India?

The rate of increase of labour force is estimated to be around 2.5 per cent per annum amounting to about 75 lakh new entrants in the labour market as against 34 lakhs in 1965, 50 lakhs in 1975 and 68 lakhs in

1985. Organized industrial sector is generating only 4 lakh jobs inspite of its impressive growth. The services sector has been experiencing more rapid growth than the rest of the economy. According to an estimate by Sundaram & Tendulkar during 1973-74 to 1985-86 while aggregate G.D.P increased at the rate of 4.25 per cent per annum the tertiary sector increased at the rate of 6.18 per cent and within this sector, public administration and defence at the rate of 9.75 percent. This sector is employment intensive and its expansion seems promising on that count. However, it is not likely to add much to welfare considering the factors contributing to its expansion. That apart even on most optimistic assumptions about rate of growth output and employment elasticity of output the non-agricultural sector including services is at the most expected to absorb 40 per cent of the additions to labour force. This is as per the employment projection exercise done for the VIth plan. The major burdens of the annual increase in labour force has therefore to be borne by the agricultural sector. On top of it, there is the problem of underutilised labour within agriculture. Howwell is the agricultural sector equipped today to carry out this enormous task of generating 45 lakh new jobs every year and at the same time attain an increase in its labour productivity? For this we need a brief critical appraisal of the growth performance of agricultural sector. But before that it is necessary to analyse the relation between employment generation and labour productivity.

At a macro level, it has been argued that there is a trade off between the two--an increase in labour productivity reducing the employment increment corresponding to a given output increment. Prof. Rajkrishna in his World Bank Staff Working Paper on Growth on Aggregate Unemployment in India decomposes components of unemployment growth in rate of growth of population and participation growth rate on supply side and growth in capital stock and growth of capital intensity on demand side -- the last two reflected in growth of net domestic product and growth of labour productivity. He estimated employment growth during the period 1959-78 as 36.6 per cent a year and pointed out that this could be decomposed into 60.5 per cent a year as the unemployment reducing effect of output growth and 23.9 per cent a year as the unemployment increasing effect of growth of labour productivity. This implies that without any growth of labour productivity, employment growth would have been of the order of 60.5 per cent a year, which would have brought about a reduction in unemployment, whereas a

reality weekly status unemployment grew by 1.7 per cent a year.

How then do we reconcile growth in employment in agriculture with increase in labour productivity. That there is need for both simultaneously cannot be denied. Prof. Khusro pointed out as early as 1962, that non-agricultural sector cannot absorb much of the net additions to labour force, leave aside under employed labour from agriculture; at the same time it requires increased supply of food and raw materials for its annually growing labour force. The first requires increased labour absorption within agriculture and the second increased labour productivity in the sector. How can this dilemma be resolved? The dilemma to some extent is more apparent than real in the Indian context and for that matter in the context of other South Asian countries too. In these countries underutilisation of labour in agriculture, low agricultural production and low level of labour productivity are interlocked. Employment generation and increased labour productivity reinforce each other in various ways in agriculture. One of the causes of low productivity of labour in agriculture is lack of capital formation in the sector. Various labour investment activities associated with land have been identified which augment quality of land and also favourably affect ability of land to absorb larger amounts of labour for current productive activities. Further employment generation and enhanced labour productivity are also positively linked via the product market or effective demand. Employment generation in agriculture leading to increase in purchasing power of the rural poor who are under-fed and malnourished and have unsatisfied demand for foodgrains raises effective demand for foodgrains. This in turn induces farmers to go in for technological improvements opening up possibilities of raising labour productivity as well as output in the agricultural sector. It has been estimated by Prof. Dandekar for the 34 years period 1951-1985, that while per capita N.D.P. increased from Rs.462.5 to 761.8-- an increase of 64.7 per cent over the period. The gross per capita consumption of foodgrains during the same period leaving out the period of acute food shortage (1951-53) increased from 181.80 kg to 185.18 kg. (Table 4 - an increase of mere 1.86 per cent). Overall income elasticity of demand for foodgrains is thus observed to be 0.03. This gives the impression that we have reached a point of satiety with regard to foodgrains, which is far from the truth, what with 40 per cent of our population still below poverty line. The only way to increase income elasticity demand for foodgrains and thus raise their effective demand

is to increase purchasing power of the rural poor by generating more employment opportunities in agriculture.

Let us now assess the performance of agricultural sector and its potential for employment generation and increase in labour productivity. During the last two and half decades, application of science and technology to agriculture along with growing amounts of both public and private investment (mainly reflected in accelerated increase in gross irrigated area) facilitated substantial increase in agricultural output and helped in attainment of self-sufficiency in foodgrains. The grains from new agricultural technology had till very recently remained confined largely to wheat and rice grown more or less in agroclimatically homogeneous tracts endowed with well-developed infrastructure especially assured irrigation and inhabited by resourceful farmers. The limited spread of green revolution is partly attributable to the nature of available technology and partly to uneven distribution of physical as well as institutional infrastructure - a prerequisite for the adoption of improved agricultural practices.

The new land saving/augmenting technology did bring about substantial increase in yield per hectare for certain crops but did not result in increased labour absorption. There is a commonly held view based on a comparison of labour intensity per hectre between developed and developing countries that in the course of economic development as land yield rises it necessarily results in a decline in labour intensity of cultivation. Trends in developed countries during the phase of their rapid industrialization confirm this. (Table 5) However, this experience of developed countries is not relevant for developing countries which are still at an early stage of development. Experience of countries such as Taiwan and Japan seems more relevant for us. Ishikawa's study relating to growth pattern of agriculture in Taiwan and Japan shows two distinct phases of land yield increase in the process of agricultural growth-labour intensity increasing in the first phase and attaining a fairly high level before declining in the second phase. He distinguishes two types of technological factors influencing labour absorption in agriculture, apart from institutional and natural factors. These are labour using technological factors like irrigation, drainage, higher yielding varieties, application of fertilizers and improved cultivation practices and labour saving factors like improvement of traditional

farm implements and agricultural mechanization in irrigation, weeding, threshing, ploughing, etc. In Japan the operation of first set of factors was powerful enough by the turn of century to push labour input to a very high level and only after that the second type of factors gradually made their appearance out weighing the role of the first type in raising labour input. There are similar findings for Taiwan though there the level of labour input did not rise to the level attained in Japan.

Further, empirical evidence relating to a number of countries with comparable values of labour force participation rates, agricultural share of labour force and arable land as a proportion of total area for different period shows labour intensity of agriculture to vary directly with population density. This tendency does not appear to hold for some countries with labour intensity around one worker per hectare. India happens to be one of the three most populous countries in this group.

The questions which are (i) Why is labour intensity per hectare rather low in India inspite of its high population density? (ii) Why has India missed the first phase of increasing labour intensity so far and what are the chances of stepping it up? An attempt is made in this paper to answer these questions. The new technologies used in agriculture has been transfered from developed countries like Japan and U.S.A. The new technology was evolved in Japan in the context of rising labour costs, scarcity of land and availability of cheap fertilizers. In the capital abundant and labour scarce economy of U.S.A. the accent was on increase in crop yields rather than on increase in cropping intensity. Given the resource endowments and conditions in these two countries the new biochemical technologies were both land and labour saving and capital using. Also conditions for their ready absorption were already present. In India and other developing countries the challenge of growing pressure of population on limited land compelled the government to borrow these technologies. Regions with relatively high availability of land per worker and also well-developed infrastructure-particularly assured irrigation were best suited for their adoption.

New technologies did however open up possibilities of increase in cropping intensity because of shorter duration crops but this did not materialize as the well endowed farmers could raise their profits using fertilizers and introducing mechanization. They did not seem to have any incentive to increase cropping intensity.

As already pointed out given the features of new technology and uneven development of infrastructure required for its successful adoption, its use was limited to Northern and Western regions. This uneven regional growth was also responsible to a very large extent for low absorption of labour within agriculture. In a large number of states with abundant availability of labour, adequate employment opportunities could not be generated as growth of agricultural output was too slow; where as in high growth regions, where labour was not plentiful, sudden rise in demand for labour induced mechanization in spite of use of migrant labour from less developed regions. Thus, for the country as a whole, there seems to be a decline in employment elasticity of agricultural output. Thus, the nature of new technology and its uneven spread have been among the most important factors responsible for slow labour absorption within India's agricultural sector.

The experiences from late 70's onwards however reveal certain favourable trends in these two directions. New technology is spreading to lagging crops as well as areas. Rice, pulses and oil seeds are showing higher growth rates. These crops specially pulses and oilseeds are growing mostly in rainfed or unirrigated areas, and during the last decade Assam, Bihar, West Bengal, Madhya Pradesh and Orissa have shown relatively much better performance. Technical change is no longer to be treated as an exogenous variable. The country is already geared to promotion of indigenous scientific research in agriculture. The agricultural research system in India has to address itself to the task of reducing regional imbalances, to the needs of small and marginal farmers, to improvement in productivity of dry land farming and imparting stability to agricultural output. What is required is intensive location specific research in agriculture to fit the technology to local environment. At the same time there is need to change the environment to create conditions suitable for adoption of new technology in presently backward regions and by small farmers. For this huge public investment for development of infrastructure is required in these regions. Agricultural extension services also need to be revamped so that they become effective carriers of latest advances in scientific research. Besides to enable our farmers to benefit from new techniques, a whole package of services has to be provided namely credit, a network of rural roads, regulated markets, godowns and of course incentive prices. Further, as emphasised by Dr. V.K.R.V. Rao to facilitate an increase in gross cropped area via an increase in cropping intensity, irrigation

coverage has to be doubled from 30 per cent of cropped area to 60 per cent. This will incidentally help to reduce in stability of agricultural output besides generating employment opportunities and raising productivity. All this is going to require huge public investment in agriculture which in turn will imply a substantial shift of investible resources to the agricultural sector. Removal of urban bias in development planning is thus the basic requirement. This point was stressed at the recent conference held by the Indian Economic Association in December, 1989.

Role of labour in agricultural capital formation also needs to be explored more fully. As already pointed out there are a number of labour investment activities like drainage, construction of field channels, bunding, levelling, terracing, etc. which help to improve quality of land and thus absorb labour productively within agriculture. This also creates further scope for absorbing labour for current productive activities in agriculture.

To complete our discussion of factors which have limited absorption of labour in agriculture, reference must also be made to the influence of size distribution of landholdings. Given the population pressure, size distribution of farms is also seen to be important in influencing labour intensity. Data from several countries show that size specific rates of labour absorption do not vary much in countries with similar population densities. Further, it is confirmed by various empirical studies that labour intensity of cultivation of individual holdings varies inversely with size. The policy implication following from this is effective implementation of land reforms. Working of labour and capital markets is also relevant in influencing labour absorption within agriculture as well as in raising labour productivity and needs to be looked into.

Before concluding a word about poverty alleviation programme for creating wage employment and self employment opportunities. It has to be admitted that these programmes have contributed significantly to make up deficiency in effective demand for foodgrains caused by wide spread poverty and unemployment. In 1988-89 alone, 850 million mandays of employment are estimated to have been generated on account of these programmes. The major weakness of these programmes however is that they are not always integrated into the overall development programme and hence result in wasteful expenditure.

There is also the danger that with reliance on such programmes government may become complacent towards the much needed anti-poverty thrust in the social and economic development programmes. As a short term measure these programmes do need to be continued. What is required then is their integration into redistributive development programmes so that the two become complementary to each other and the existing dichotomy between programmes for equitable agricultural development and programmes for poverty alleviation is removed.

Table 1

Share of Agriculture in NDP and in Labour Force

Census Yr.	Share in NDP	Share in Labour force.
1961	49.34	69.51
1971	42.76	69.78
1981	35.52	66.69

Table 2

Per-capita NDP in agriculture & non-agriculture sector at 70-71 prices.

	Agr. (Rs.)	Non-agr. (Rs)	Non-agr. to agr. ratio
1951-53	405.66	593.13	1.46
1976-83	415.61	1216.78	2.93

Table 3

Labour Productivity in Agriculture in DC's & LDC's
(Tonnes of Wheat equivalent - 1978)

Region	Output per hectare	Output per male agr. worker
DC's	0.93	46.3
LDC's	0.59	2.8

Source: FAO Prod. Year Book - 1979.

Table 4

Estimates of gross consumption of Food-grains per-capita, per-annum (kg.)

Period	Gross per capita consumption
1951-53	164.64
1954-58	181.80
1959-67	184.87
1968-75	185.41
1976-83	185.18

Table 5

Labour use & Productivity in DC's - 1980-1970

Country	L/A		Y/L		Y/A	
	1880	1970	1880	1970	1880	1970
Japan	1.52	0.64	1.89	15.77	2.86	10.03
Germany	0.16	0.08	7.94	71.40	1.25	5.40
U.K.	0.07	0.03	16.19	87.55	1.10	2.61
U.S.A.	0.04	0.006	13.00	157.40	0.51	0.98

L = Male agr. workers,

A = Hectares of agr. land,

Y = Output in wheat equivalents.

8. Aspects of Fiscal Imbalance

Shrawan Kumar Singh

Some important issues which need to be addressed are:

- steady decline in domestic savings
- the inflation rate
- the growth of liquidity in the economy
- the fiscal deficit
- the external payments situation.

In fact, the inflationary pressures, the budgetary gap and the declining reserves are all interconnected.

Saving

It is disconcerting to learn that the downward trend in the rates of saving (both gross and net) has been continuing. It has to be noted that the decline in the saving ratio is due entirely to the large fall in the savings of the public sector. Savings of the public sector have declined from the peak level of 4.6 per cent of GDP at market price in 1981-82 to about 2.1 per cent in 1988-89.

Of the total household saving, around 60 per cent, is held in financial assets.

the recent steps to increase personal savings have been widespread, but they have created a clumsy structure of the effective rates of return.

all this has created a complex picture. Sometimes, large concessions are available even though there is no net saving.

Judging by the recent trends in policies pertaining to asset and income distribution, one gets the impression that the emphasis on

equality has become somewhat subdued. During the last few years, Estate Duty has been abolished, exemption limits on Wealth and Income taxes have been raised, tax rates on upper income brackets have been reduced, and several saving schemes have been introduced with the particular intention to provide higher incentives to the high-income earners to save more and thereby accumulate more.

The Sixth and the Seventh Series of National Saving Certificates are so designed that the higher the income bracket of the purchaser, the higher would be the rate of return on his savings. Over and above the 12 per cent interest per year, these certificates permit the depositor to deduct the capital cost of the certificates from the taxable income on the same lines as provident fund contributions or life insurance premia. While this provision is salutary for tax payers who are retired or above insurable age, for others, particularly the high income earners the benefit is disproportionately large. Professor Bhabatosh Datta has illustrated this with a simple arithmetical example: "If a person is eligible for full 100 per cent benefit for his purchase of National Saving Certificates worth Rs.6,000 and he is in tax-bracket of 30 per cent, he saves Rs.1,800 in tax in the year of purchase. His net investment is thus Rs.4,200, on which he gets an interest of Rs.720 (12 per cent on Rs.6,000). His effective return will thus be 17.14 per cent. If the depositor is in tax-bracket of 50 per cent, his net investment will be Rs. 3,000, and the effective return on his 'saving' of Rs. 6,000 will be 24 per cent".

Some of these measures have been adopted to compensate income earners for the reduction in their real income due to inflation. But the impact of inflation on the poor is harsher than that on the rich.

The rate of the private corporate sector is insignificant. The total is of course affected by the existence of large number of sick, closed or inefficiently run companies and also by the deliberately arranged losses of subsidiary companies owned (openly or secretly) by large profit earning units. Tax concessions will not increase the corporate savings and more direct methods are needed. But such methods bring in their trail other difficulties. The immediate need is to increase the public sector savings or at least to reduce the dis-savings of this sector. In other words, much depends upon the performance of the public sector.

- This brings in the whole question of the governmental fiscal operations of government receipts and disbursements.
- The fiscal deficit of the government is not identical with the dissaving of the public sector, but they are closely related.
- The important question now is how the Planning Commission will frame its financial estimates on the framework of a declining rate of saving.

In this context, Professor Bhabatosh Datta has raised two questions. According to him, the puzzle remains: (i) how is it that with a saving rate lower than expected, there is a growth rate higher than expected? (ii) Are all these debates around the fine-tuned incremental capital-output ratios simply paper exercises?

Growing Public Debt

India's public debt currently stands at about 65 per cent of the country's GDP. At the beginning of eighties the ratio was only about 40 per cent. In the early fifties the ratio was no more than 30 per cent. Most of the debt is domestic. In India, the internal indebtedness of the Government has reached a scale where incremental borrowing would be needed merely to finance the interest payment liabilities (Table II). Indebtedness demands a close look and all aspects of it.

- The growing internal debt emerges from expenditure that does not create productive assets.
- What is of concern to the economy is the rising revenue deficit.
- The increasing recourse to capital receipts to bridge a part of the revenue gap has come to be seen by fiscal economists as contrary to the principles of sound fiscal management.
- Dr. I.G. Patel, in an interview, has stated 'it is the internal debt that I am most worried about as it will make a real difference to the economy. The country has to go slow on building up domestic debt'.

Growing levels of borrowing by the Government and public sector undertakings raise two major concerns:

- (i) the sustainability of the present level of Government borrowing. Unless there are adequate surpluses in the revenue which can be

- utilised for debt servicing, the budgetary deficit continues to widen. The increased borrowing for debt - servicing will create the vicious circle of progressively higher interest burdens and still higher borrowings.
- (ii) the effect of the increasing level of Government borrowing coupled with that of public sector undertakings on private sector investments.

To reduce the burden of internal borrowing government will have to implement its policies in a stricter way. Borrowing for the purpose of meeting budgetary deficit should stop. Borrowed money should be utilised only for productive capital investment or creation of solid physical assets.

Revenue Deficit

It is the total picture that really counts in determining the impact of government operations on the economy as whole. The real gap is the total public sector borrowing requirement. Over the years, the practice has grown under which the entire budget deficit of the Central Government has been financed by the Reserve Bank leading to an automatic monetisation of the deficit. This would require the containing of the fiscal deficit in terms of total net borrowing of the government sector as well as budgetary deficit in the sense of RBI credit to the government.

While earlier the Union Government had revenue deficit only twice-1971-72 and 1972-73 on account of Bangladesh disturbances. But since 1979-80 it has become a permanent feature of Union Budget. Since 1979-80 it is growing by 35 per cent per annum.

A persistently large deficit spending clearly implies that the Government has made a habit of living beyond its means. When the Government is reckless in its choice of programmes and thinks of nothing but its immediate political needs, deficit financing will remain at an embarrassing level. The more the deficit spending the greater has been the extravagance. It is pointless for anyone to blame the pressures of non-plan spending and the compulsions of plan financing for the ever widening budgetary gap.

Central revenue deficit is due to:

- (i) the growth of Plan expenditure, and
- (ii) the interest payments

The Central revenue deficit is based on the magnitude of balance from current revenue (BCR) and plan expenditures under revenue account. Since the BCR has become negative in the recent period, the BCR causes and plan revenue expenditure (PRE) accelerates the Central revenue deficit.

The BCR has become negative due to the fact that the growth of Non-Plan revenue expenditures outweighed the growth of revenue receipts. Particularly, the interests payment which has caused the emergence of revenue deficit. While the growth rates of all other items of non-Plan revenue expenditure (NPRE) are less than the growth rate of revenue receipt, the growth rate of interest payments exceeded the growth rate of revenue receipts and thereby caused the emergence of revenue deficit (Table III and IV).

“What underlies the Government’s deficits and the resource crisis of the public sector is not the lack of growth in the economy so much as the failure of the political system to ensure adequate contribution to the exchequer from the beneficiaries of growth” (Amaresh Bagchi). The drive to improve economic management must begin in efforts to keep down the budgetary deficit. Once this is accepted, there will be greater discipline in spending and utilisation of the funds allocated downstream.

The dominant role of the government in deciding the size of deficit finance and procuring credit from the RBI deprives the monetary authority of its important role of influencing the rate of monetary expansion. The question of monetary policy is largely subsumed in India in the fiscal policy, because the government’s monetised deficit is the largest contributor to the growth of liquidity in the system. The RBI in its Annual Report (1988-89) has rightly stressed that an effective monetary policy would require the avoidance of the automatic monetisation of the budget deficits. For this, a substantial reduction of Centre’s revenue deficit is needed. The Report further states that “the overall economic policy framework would then improve and it would give to the Reserve Bank the necessary freedom to determine the level of reserve money creation and therefore the money supply

depending on how the real factors in the economy are evolving, thus enabling it to play a more effective role in contributing to the objective of growth with price stability".

Table 1

Gross and Net Savings
(as a per cent of NI at market prices)

Year	Gross	Net	Net Savings by Sectors		
			House-holds	Private Corporation Sector	Public Sector
1980-81	21.2	13.5	13.2	0.5	(-)0.2
1985-86	21.0	12.2	12.8	0.6	(-)1.2
1986-87	21.6	12.7	14.4	0.2	(-)1.9
1987-88	20.2	11.1	13.7	0.3	(-)2.9

Source: CSO

Table 2

Ratio of interest payments to Annual incremental liabilities

Year	Percentage
1980-81	27.3
1985-86	31.2
1986-87	31.8
1987-88	38.7
1988-89 (RE)	43.3
1989-90 (BE)	54.0

Source : *The Economic Times*, March 16, 1989.

Table 3

Growth of receipts, expenditures & deficit under Revenue Account

Item	Annual Compound Growth Rate 1978-79 to 1989-90	As per cent of total Revenue Expenditure	
		1978-79	1989-90
	(1)	(2)	(3)
Revenue deficit (a)	35.0	5.7	8.2
Revenue receipts (b)	20.4	102.7	91.8
Interest payment	22.1	18.1	19.9
Subsidy	18.5	13.5	9.9
Grants	16.9	24.1	13.0
Defence	13.7	23.9	11.1
Administrative Services	17.0	4.0	3.5

Notes : (a) For Revenue deficit the base year relates to 1979-80 as there was no revenue deficit in 1978-79.

(b) Tax share of States has been excluded assuming it as legitimate revenue of the States.

Source: "Central Revenue Deficit", by G. Chokkalingam, *Financial Express*, August 25, 1989.

Table - 4
Growth and composition of total union budgetary deficits (Rs. Crores)

S.No.	Item	II Plan 1956-57 to 1960-61	III Plan 1961-62 to 1965-66	Annual Plans 1966-67 to 1968-69	IV Plan 1969-70 to 1973-74	V Plan 1974-75 to 1978-79	VI Plan 1980-81 to 1984-85	VII Plan 1985-86 to 1989-90
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Deficit (-) or surplus (+) under Revenue Account	+ 220.00	+ 1018.74	+ 413.10	+ 411.20	+ 2671.70	- 9157.70	- 40520
2.	Deficit under Capital Account	- 1156.00	- 1791.70	- 1177.10	- 2433.90	- 6327.90	- 1629.10	+ 6229
3.	Total Budgetary deficit	- 917.95	- 782.15	- 764.00	- 2046.30	- 3656.20	- 10786.80	- 34291
4.	(1) as % of (2)	+ 19	+ 57	+ 35	+ 17	+ 42	- 562	651

Note: Figures include revised estimate for 1988-89 and budget estimate for 1989-90.
Source: Same as Table 3.

9. Export Performance of the Public and Private Sectors

D.P. Bhatia

The present paper is in two parts. Part I presents quantitative analysis of export performance of the public and the private sector. Part II is devoted to raising some policy issues.

[I]

From the late seventies, number of steps have been taken to increase India's exports. These steps include tax concessions, credit facilities, etc. However, as yet these steps have not made much impact on the acceleration of exports. An upward trend in exports in the last few years appears to be due to re-export of the goods, may be in slightly changed form. Looking into the past about two decades whatever rise in exports has taken place, a substantial part of that is explained by the attempts of the Public Enterprises complemented by the small scale units. Export performance of private medium and large units has failed to make a mark.

A. Public Sector

The data on exports given in Table 1 reveal that the exports by the Public Enterprises increased by more than 24 per cent per annum during the period 1971-72 to 1984-85. This growth rate exceeded the annual growth rate of 16 per cent in total exports from India. Consequently Public Sector's share in total exports (Table 1) which was 21.46 in 1971-72 rose to 40.56 per cent by 1975-76. During the period 1974-75 and 1981-82, Public Sector's share in total exports ranged between 30 and 35 per cent. During the eighties 1981-82 to 1986-87, Public Sector's share in India's exports has increased substantially. It touched a level of 54 per cent in 1983-84.

It is sometime argued that rise in the export of the public sector is due to canalised items. In order to look into this, the total exports by the Public Enterprises have been split into canalised exports, non-canalised exports and services. These data are in Table 2.

The share of canalised items in fact declined over the period. In 1977-78 canalised items formed more than 42 per cent of the Public Sector's exports which declined to less than 13 per cent by 1983-84. During the last three years (1984-85 and 1986-87) the trend has reversed. However, in 1986-87 still the share of canalised items was less than that during the earlier years. Thus, over the past decade or so the share of non-canalised items along with services, has increased in the total exports by the public enterprises.

Another way to evaluate the performance is to look at the share of exports as a percentage of total sales. These data are given in Table 3. In this case, however, no clear trend is visible. The share of exports in total sales has been almost stable though there have been cycles of 3-5 years.

B. Private Sector

Exports by the Private Sector are divided into those by the medium and large (M&L) units and those by the small scale units (SSI).

Exports by the *M&L units* increased from Rs. 1,108 crores in 1971-72 to Rs. 3,000 crores by 1977-78. This was a period when world prices were rising sharply. From 1977-78 onwards the exports by the M&L Units have stagnated and even fell below that level in many years. Taking the price rise into consideration, export in real terms declined.

The export performance by these units presents a depressing picture when considered in relative terms. The share of these units in India's total exports was 68.9 per cent in 1971-72 which declined to 43.87 per cent in 1975-76. Later the percentage share recovered and was stable upto 1979-80. Thereafter the percentage share of these units declined to 29.53 in 1984-85 (Table 1). During 1985-86 and 1986-87, the decline was reversed.

Thus the share of private M&L units has steeply declined in India's exports over the past one and a half decades. Next we examine the

exports' share in the total sales and net earning i.e. exports minus imports. Data for working out export-sales ratio and net export earning are available from the Industrial Credit and Investment Corporation of India (ICICI) on sample basis. Using these data exports-sales ratio and net foreign exchange earnings have been worked out in Table 4.

Export-sales ratio which was about 8.4 per cent in 1976-77 declined to less than 4.5 per cent in 1983-84. During 1984-85 to 1987-88 this ratio has been around 5 per cent. This ratio when worked out at constant prices is likely to reveal a further decline as world market prices rose at a rate higher than domestic market prices during the period under consideration. Net foreign exchange earnings by these units have declined substantially and, during the past few years, it has turned negative. Net foreign exchange earning by these units was Rs. 150-250 crores during 1975-76 and 1978-79. These earning have been negative at Rs. 72 crores and Rs. 450 crores during 1982-83 and 1987-88.

Thus, the analysis presented above reveals a negative contribution of these companies to India's export earnings. Compared to the medium and large units, *small scale units* have shown a better performance. Exports by SSI over the period have increased from Rs. 155 crores in 1971-72 to Rs. 2,600 crores in 1984-85. There has been a steady rise in exports and the percentage share in India's total exports increased from 9.64 per cent to 22.62 per cent (Table I).

Exports as a percentage to total sales in the case of SSI units was 5-6 and this percentage over the period has been maintained (Table 5). Analyses so far reveal that in raising exports from India the contribution of SSI in this respect is also important. The growth rate in exports by the SSI and that by the Public Sector has been almost of the same order.

The contribution of Private Sector M&L units reveals a disturbing picture. Its share, as we have seen, has sharply declined in India's total exports. India's export performance would have been better, if private M&L units could have shown a better performance by holding their relative share in India's total exports.

[II]

Analysis presented above show that Private Sector has failed to respond to the incentives it has been demanding for raising exports.

Export subsidy rose steeply during the seventies compared with that in the sixties. The annual growth rate in export subsidies during the seventies was about 24 per cent compared to about 14 per cent during the sixties. During 1980-81 to 1986-87, the annual growth rate is over 12 per cent. Besides this there are many other incentives like import replenishment, priorities in allocations, licences, etc. Government also incurs expenditures on the maintenance of EPCs. A substantial part of the subsidies and other incentives is moped up by the medium and large units. However, as we have seen their interest in selling abroad is not picking up.

As far as grant of incentives to the industries for raising exports is concerned, the Indian economy has its own limitations. A question that may be asked is, why we want to increase exports. A usual answer available to this question is to meet our import requirements. The need of pushing up exports is basically related to increasing requirements of imports. Now, imports in our economy are mostly composed of inputs to the industries and finished goods. Import data available for the past decade suggest that most of our imports are demanded by the elite groups, like electronics, components of cars, etc. Another type of imports, specially for communication is again a requirement of the elites. Then we have been importing machinery which have been substituted for labour. Imports for consumption by the masses formed a very low share. Thus, there is a need to look at the import policy and the resulting no-holds-barred drive for exports. A warning to this effect was earlier given by Prof. Amit Bahaduri and D.K. Rangnekar. It was stated that "It seems that this committee on Export Strategy has interpreted its task as one of recommending a series of schemes and methods for promoting exports without being concerned too much about the economic costs and social consequences of such promotional schemes. In effect, this means assigning an almost *absolute* priority to expansion of exports. This, in our view, is wrong, both in terms of elementary economic logic and social implications. What we need instead is *relative* priority to be assigned to promotion of exports, in relation to other major economic activities".*

The growth rate in the domestic product of India during the seventies, even after the first oil price hike in 1973, was not adversely affected by the international economic crises. In fact, there was some

* Note of Dissent to Committee on Export Strategy 1980's, p 178.

improvement during the early seventies compared to the sixties. After the second oil price hike, whereas European countries faced negative growth rate, all time high unemployment, sluggish investment and severe balance of payment crises, India has kept up its pace of development. A report, prepared for the UN has shown India's better performance compared with other developing countries. This performance, it appears, became possible due to the policy of limited openness of the economy. The effect of international recession was not felt in the domestic market and then output on this account was not adversely affected.

A memorandum submitted by R.C. Dutt and others to the ex-Prime Minister Rajiv Gandhi in March 1987 has warned "of the dangers of building an economic system with marked reliance on foreign investments" and stated that "government" unwillingness or inability to tax the rich would only lead to unequal distribution of wealth and income and to dependent development and social crisis.

The signatories also expressed concern over foreigners making decisions in substantial sectors of the Indian economy or if these decisions were made by Indians, they would have to be acceptable to the foreigners. It was further observed, "when these foreign interest conflict with national interest they can only frustrate the hopes and aspirations cherished by people who liberated themselves from rule after a hard-fought struggle. Latin America abounds in instances of the power and influence of such interests with the national aspirations".

It is surprising that with all these warnings, exported growth policies have been followed from the late seventies. The success of these policies, if at all, have been very little. Now with the change in the government at the centre, it is felt that a time has come for re-evaluating our export policy. It appears, that there is a need to review the export incentives and withdraw if necessary. There is a scope for import substitution, and develop indogeneous technology which is more labour intensive so that a journey to achieve the goal of self-reliance long back advocated is started.

Table 1

Export Shares in India

(Rs. in crores)

Year	Total Exports	Public Sector		Private Sector		Medium & Large	
		Percent- tage Share	Exports	Percent- tage Share	Small Units Export	Percent- tage Share	Exports Percentage Shares
1971-72	1,608	100.00	345	21.45	155	9.64	1,108 68.90
1972-73	1,971	100.00	502	25.47	306	15.53	1,163 59.01
1973-74	2,523	100.00	704	27.90	393	15.58	1,426 56.52
1974-75	3,329	100.00	1,151	34.57	538	16.16	1,640 49.26
1975-76	4,043	100.00	1,640	40.56	629	15.56	1,774 43.88
1976-77	5,146	100.00	1,753	34.07	766	14.89	2,627 51.05
1977-78	5,408	100.00	1,562	28.88	845	15.63	3,001 55.49
1978-79	5,555	100.00	1,934	33.02	1,069	19.24	2,652 47.74
1979-80	6,201	100.00	1,913	30.85	1,226	19.77	3,062 49.38
1980-81	6,576	100.00	2,217	33.72	1,643	24.98	2,716 41.30
1981-82	7,776	100.00	2,746	35.36	2,070	26.65	2,950 37.99
1982-83	9,137	100.00	4,747	51.95	2,094	22.92	2,296 25.13
1983-84	10,168	100.00	5,532	54.41	2,350	23.11	2,286 22.48
1984-85	11,959	100.00	5,827	48.72	2,600	21.74	3,532 29.53
1985-86	11,012	100.00	3,822	34.71	2,769	25.15	4,421 40.15
1986-87	12,551	100.00	3,942	31.41	3,648	29.07	4,961 39.53

Table 2

Public Sector's Exports

(Rs. in crores)

Year	Canalised	Non-canalised	Services	Total
1977-78	658 (42.13)	904* (57.87)	--	1,562 (100.00)
1978-79	723 (39.42)	1,111* (60.58)	--	1,834 (100.00)
1979-80	754 (39.41)	1,159* (60.59)	--	1,913 (100.00)
1980-81	612 (29.81)	1,556* (70.19)	--	2,213 (100.00)
1981-82	612 (22.21)	1,110 (40.28)	1,034 (37.51)	2,756 (100.00)
1982-83	652 (13.73)	2,753 (57.98)	1,343 (28.29)	4,748 (100.00)
1983-84	710 (12.83)	3,317 (59.96)	1,505 (27.21)	5,532 (100.00)
1984-85	2,568 (44.05)	1,956 (33.54)	1,307 (22.41)	5,831 (100.00)
1985-86	1,535 (40.41)	1,014 (26.09)	1,530 (32.90)	3,799 (100.00)
1986-87	1,219 (30.92)	1,285 (32.60)	1,438 (36.48)	3,942 (100.00)

* Includes services

1/ includes Rs. 1,854.37 crores worth of exports of petroleum by IOC

Figure in parentheses is percentage to total.

Table 3

Public Sector Performance

(Rs. in crores)

Year	Sales	Exports	Exports as percentage of sales
1968-69	2,393	272	11.37
1969-70	3,010	319	10.60
1970-71	3,309	369	11.15
1971-72	3,975	345	8.68
1972-73	5,324	502	9.43
1973-74	7,855	704	8.96
1974-75	10,185	1,151	11.30
1975-76	11,688	1,640	14.03
1976-77	14,911	1,753	11.76
1977-78	18,028	1,562	8.66
1978-79	19,061	1,834	9.50
1979-80	23,290	1,913	8.26
1980-81	28,635	2,217	7.74
1981-82	36,492	3,056	8.38
1982-83	41,489	4,748	11.31
1983-84	47,272	5,532	11.70
1984-85	54,784	5,831	10.64
1985-86	62,221	3,799	6.11
1986-87	69,016	3,942	5.71

Source: Government of India, Bureau of Public Enterprises, *Public Enterprises Survey* issues.

Table 4

Net Exports - sample Corporate Sector

(Rs. in crores)

Year	No. of Unit	Export-Sales Ratio		Ratio (%)	F.E. Earnings	Net F.E. E.F. Expenditure	Earnings Net F.E. Earnings	Earning Expenditure
1	2	3	4	5	6	7	8	9
1975-76	276	405	6,271	6.45	407	246	161	165.57
1976-77	207	464	5,534	8.38	472	218	254	216.59
1977-78	207	495	6,057	8.18	505	352	153	143.37
1978-79	236	583	7,772	7.50	608	471	137	129.02
1979-80	236	639	9,048	7.06	670	621	49	107.87
1980-81	263	708	10,860	6.51	727	648	79	112.20
1981-82	263	854	13,048	6.55	879	826	53	106.43
1982-83	265	961	15,925	6.04	999	1072	-72	93.26
1983-84	265	827	18,404	4.49	895	1020	-125	87.75
1985-86	264	1218	21,879	5.57	1309	1573	-264	83.21
1986-87	264	1242	24,100	5.15	1348	1797	-450	74.97
1987-88	279	1384	27,044	5.12	1558	1998	-440	77.98

Source: The Industrial Credit and Investment Corporation of India,
Financial Performance of Companies for various years.

Table 5

Small Scale Units

(Rs. in crores)

Year	Exports	Production	$\frac{\text{Exports}}{\text{Production}} \times 100$
1971-72	155	NA	--
1972-73	306	NA	--
1973-74	393	7,200	5.46
1974-75	538	11,000	4.89
1975-76	620	12,400	5.07
1976-77	766	14,000	5.47
1977-78	845	15,700	5.38
1978-79	1,069	17,380*	6.15
1979-80	1,226	19,060	6.43
1980-81	1,643	25,830*	6.36
1981-82	2,070	32,600	6.35
1982-83	2,094	35,000	5.98
1983-84	2,350	41,300	5.69
1984-85	2,553	50,520	5.05
1985-86	2,769	61,228	4.52
1986-87	3,648	72,250	5.05

* interpolated figures

,Source: DCCSSI, *Annual Survey* for various years.

10. On the Feasibility of Reducing Budgetary Food Subsidies

S.P. Pal & D.K. Pant

One of the most disquieting features of the Indian economy in the eighties has been a persistent fiscal imbalance. The revenue expenditure has been growing at a faster rate than revenue receipts, leading to a growing mis-match between government revenue and expenditure. While all the components of the revenue expenditure have grown very fast, interest payment and budgetary subsidies have risen faster than the growth in total expenditure. In the eighties, interest payment tops the list with an annual growth of 24.7 per cent, followed by subsidy (19.2 per cent), as against the over-all growth rate of 17.5 per cent in the revenue expenditure. The Economic Advisory Council, in its report of December 1989, has drawn attention to this fiscal imbalance and accorded a very high priority to its removal at the earliest.¹

A reduction in budgetary subsidies could, directly and indirectly, contribute to a significant reduction in government current expenditure and hence, to the removal of the fiscal imbalance. However, in an economy characterised by inequity in distribution of income and resources, subsidies are powerful instruments in the armoury of the government to direct allocation of resources and distribution of income. All the existing subsidies in the economy are expected to contribute to the realisation of the objectives of growth and equity. The feasibility of measures to reduce subsidies would depend on the magnitude and direction of their impact on various socio-economic parameters.

The objective of this paper is to identify alternative measures to reduce the budgetary food subsidy in the economy and examine the feasibility of such measures on the basis of their impact on the relevant socio-economic parameters.

I. TREND IN FOOD SUBSIDY AND FACTORS AFFECTING ITS GROWTH

The budgetary subsidy on foodgrain has grown from only Rs.18 crores in 1970-71 to Rs.650 crores in 1980-81 and further to more than Rs.2200 crores in 1988-89. The rise has been sharp (the annual growth rate was around 20 per cent in the first half of the eighties) particularly during the late seventies through the mid-eighties - a period characterised by a steady growth in domestic production and procurement, low imports and high levels of public distribution and stock of foodgrains. The annual growth rate in budgetary food subsidy, however, declined to about 5 per cent during 1986-87 through 1988-89, following the relative stagnation in domestic production since the mid-eighties and the severe drought of 1987-88, which led to low procurement and declining government stocks of grains (Table 1). However, with the two consecutive good agricultural years since 1988-89, both domestic procurement and stocks have shown a tendency to rise again and if this trend continues, along with the existing government policies with regard to procurement, distribution, stocking and prices of foodgrains, food subsidy are likely to exhibit the trend observed in the mid-eighties.

To identify the factors responsible for the growing burden of food subsidy, it is necessary to understand how budgetary food subsidy is defined. Broadly speaking, the budgetary food subsidy is defined as the difference between the annual cost of government operations in foodgrains and the revenue realised from sales of grains. The government operations include procurement, distribution, transportation and handling of grains and stocking operations. Revenue includes sales proceeds from the public distribution system (PDS), open market and roller flour mills.² In any year, the magnitude of food subsidy depends on the following parameters: the volumes of procurement, distribution, other sales and buffer stock, on the one hand, and procurement price, issue price, sales price and unit costs of operations, on the other. An analysis of the direction of movement of these parameters would help identify the factors that have led to the steep rise in food subsidy over the years.

For analytical convenience, a distinction may be made between the 'consumer subsidy' and 'subsidy due to stocking operation'. The former is defined as the product of the difference between the 'unit economic cost' and sales price (issue price) of foodgrains, and the quantity distri-

buted. The unit economic cost of grains is the average unit value of grains with the government which is worked out as the sum of the value of the opening stock, the value of grains procured is the current year, total procurement incidentals, current year's distribution cost and losses, divided by the total quantity of grains handled during the year. Subsidy due to stock holding operations is computed as the sum of the interest charges on the value of the unsold stock, storage cost and a few other incidentals for maintaining the stock during the year.³

In simple terms, the total consumer subsidy in any year is the product of the unit consumer subsidy (defined as the difference between the economic cost and the issue price) and the quantity distributed during the year. Similarly, the subsidy for stocking operations in any year could be defined as the product of the unit cost of operations of stock and the level of stock during the year. To identify the factors responsible for the growth in budgetary food subsidy the time paths of the unit consumer subsidies, unit cost of operating stocks, the levels of public distribution and government stock will have to be analysed separately.

The unit consumer subsidy in any year depends on a number of parameters, viz. the procurement price, unit value of previous year's stock, unit procurement cost, unit distribution cost (all of which together determine the economic cost of grains) and the issue price. The movement of these parameters during the eighties is shown in Table 2, separately for rice and wheat. A few observations can be made on the basis of the information presented in the table. First, in the case of rice, the government price policies are not responsible for widening the gap between the economic cost and sales realisation, and hence unit subsidy, as issue price (6.3 per cent) has grown faster than the procurement price (5.4 per cent). In the case of wheat, on the other hand, procurement price grew at a faster rate (5.01 per cent) than the issue price (4.36 per cent) and hence, the government price policies have led to an acceleration in the growth of unit consumer subsidy. Surprisingly, however, the annual growth rate of unit consumer subsidy in wheat is less (10.7 per cent) than that in rice (15.2 per cent). This is so because the gain from commercial sales of wheat (to the roller flour mills and in the open market) is considered in the computation of the consumer subsidy in wheat.

Secondly, the rate of growth in the economic cost of both rice and wheat is faster than that in their procurement prices. This implies that

the unit cost of operations of the public agencies responsible for implementing government food policies has grown at a very fast rate. It is evident that two components (of the unit cost of operations), viz. distribution cost and unit value of previous year's stock, have contributed to the more than proportionate growth in the unit consumer subsidies over the years. Since the unit value of the previous year's stock has grown at a faster rate than the procurement prices, it is obvious that the annual growth rate in the unit cost of maintaining buffer stock has been very high (9-10 per cent).

In addition to the very high growth rates in the unit consumer subsidies, the rise in the levels of procurement, public distribution and stocks with the public agencies has also contributed significantly to the growth in the budgetary food subsidy (Table 1). Though there exist year-to-year fluctuations in all these parameters, it is evident that the levels of operations of the public agencies have risen manifold over the years. During the period 1980 through 1986 when there was a steady growth in domestic food production, procurement, public distribution and year-end stocks of foodgrains grew at the rates of 9.9 per cent, 5.2 per cent and 12.4 per cent per annum respectively.

II. FEASIBLE MEASURES FOR REDUCING FOOD SUBSIDY

Arithmetically one can suggest a number of measures that could contribute to the reduction in food subsidy. However, it is well known that some measures like lowering procurement prices, raising issue prices and a quantitative limit to procurement of grains are not feasible, particularly socio-politically. Keeping in view the basic objectives of food policy and the movement of the relevant parameters that affect the magnitude of food subsidy the following measures may be considered feasible:

- a reduction in the quantity of grains distributed through the PDS;
- an increase in the operational efficiency of the public agencies so that their cost of operation goes down; and
- a reduction in the quantum of stocks with the government agencies.

In view of the fact that at present the PDS covers nearly all the urban households irrespective of their income levels, a reduction in the volume

of public distribution of grains is feasible. In particular, reducing the volume of distribution through the elimination of the households belonging to the upper income groups will meet with the least socio-political resistance. Similarly, reducing the cost of operation of the public agencies is also a feasible proposition, as studies have shown that rationalisation of the movement plan, mechanisation of the weighing system, making godowns beyond a certain capacity rail-fed, measures to minimize storage and transit losses, optimum use of godowns etc. could contribute significantly toward reduction in operational costs of FCI.⁴ Nearly two-thirds of FCI's operational costs are controllable. A reduction in the quantum of stock without any changes in the existing procurement policy is also feasible through open market operations. However, there is ambiguity with regard to the optimum level of stock to be maintained for price stability. Currently, the thinking in the government is that the buffer stock should be around 10 million tonnes in addition to the operational stock for regular public distribution. But, during the period 1982 through 1986 the level of stock maintained was higher than the desired level, which led to an acceleration in the amount of budgetary subsidy in food grain during this period.

The viability of the suggested measures, however, will have to be determined not only on the basis of socio-political feasibility, but also on the basis of their impact on the relevant economic parameters. An attempt is made in the paper to analyse the impact of the suggested measures through a general equilibrium model. The framework of the model is given in the Appendix.⁵ The specific measures considered for policy simulation are indicated below.

S-A Reduce Public Distribution

Eliminate all urban households having an annual income of more than Rs.22000/- from the purview of the PDS in foodgrains. This would reduce the quantity of distribution by 4 million tonnes (rice 1 m. tonnes and wheat 3 m. tonnes). Increase the open market sale of grains by 4 million tonnes so as to keep the total supply of foodgrains unaffected. The open market sale takes place at market prices (and not at subsidised rates). This leads to a reduction in food subsidy, the saving is invested in the development of irrigation infrastructure, particularly in projects under construction and in better water management practices to increase the utilization rate of the on-going projects, so that the gains from such investments are realised in a relatively short period.

S-B Increase in Operational Efficiency

In this situation it is assumed that procurement, distribution and stock of grains remain at their present levels, but the efficiency of the public agencies responsible for implementing government policies with regard to procurement, distribution and stocking operations increases. If this increase in efficiency leads to a reduction in the operational cost, then the said saving is invested in irrigation in the same manner as in S-A. Specifically, a 10 per cent reduction in the operational cost is assumed.

S-C Reduce Distribution & Increase Efficiency

This is a combination of S-A & S-B. In other words, public distribution is reduced by 4 m. tonnes, open market sale increases by 4 m. tonnes and operational cost decreases by 10 per cent. Here too, the entire saving in subsidy is invested in irrigation.

S-D Increase Irrigated Area Under Rice

All the assumptions of S-C are retained, except that additional irrigation potential created through saving in food subsidy is utilised in crops other than wheat. Specifically, it is assumed that the marginal share of wheat in the additional irrigation potential is allocated to rice. The share of other crops, however, remain the same. A trend analysis suggests that the marginal shares in additional irrigation potential are 52 per cent, 18 per cent and 30 per cent respectively for wheat, rice and other crops. As a result of the assumption made here, the marginal share of rice increases to 70 per cent, the share of other crops being 30 per cent.

The results of the simulation experiments carried out in the general equilibrium framework are presented in Table 3. To save space the results are presented in a highly aggregative form. The impact on a few parameters is reported here.

III. THE DISCUSSION OF RESULTS

S-A Reduction in Distribution

A reduction in the quantity of public distribution of grains by four million tonnes leads to:

- a reduction in food subsidy by 6.6 per cent.
- an increase in irrigation potential by 0.18 per cent. In working out the investment funds available for additional irrigation potential, the requirement for additional fertilizer subsidy arising out of additional fertilizer consumption has been netted out;
- an increase in foodgrain production by 0.17 per cent; and non-foodgrain (agriculture) by 0.07 per cent;
- an increase in the market price of rice by 4.8 per cent; and
- a reduction in the market price of wheat by 11.8 per cent.

The most significant result is that a reduction in public distribution of grains and a corresponding increase in the open market supply leads to a rise in the price of rice and a sharp drop in the market price of wheat. One plausible explanation for this differential behaviour of market prices of rice and wheat can be found in the government policies with regard to rice and wheat in the PDS. As per the information available on the PDS quota of rice and wheat in different States, it is noted that in general, a rice consumer is entitled to draw nearly equal quantities of rice and wheat.⁶ In other words, wheat is issued quite liberally to rice consumers in most of the States. Since, the entire cereals requirement of a rice consumer is not met in terms of rice in the PDS, he has to supplement it either by the PDS wheat or by buying rice from the open market. Obviously, if the price differential of (open market) rice and (PDS) wheat is negligible, a habitual rice consumer will prefer to buy rice in the open market. However, the open market price of rice is more than twice the issue price of wheat in most of the States (for example, in 1989 the retail open market price of the 'parmal' rice was more than Rs.5/kg. as against the issue price of wheat around Rs.2/kg.) When an average rice consumer faces these two prices, he would be induced to buy the PDS wheat as, with the same marginal expenditure on foodgrains, he could increase his calorie intake substantially. To put it differently, for a given level of foodgrain requirement his expenditure will increase substantially if he chooses to buy rice in the open market rather than the low-priced wheat in the PDS. Thus, by not meeting the full requirement of a habitual rice consumer in terms of rice and by making low-priced wheat available to him in the PDS, the demand for wheat is artificially increased at the cost of rice.

When the quantum of foodgrains is reduced in the PDS, nearly 30 per cent of the urban consumers will have to meet their full requirement

of foodgrains in the open market. The majority of these consumers will be in States where rice is the preferred grain. In the open market the consumer faces the open market prices of rice and wheat. In most of these States the price differential between rice and wheat in the open market is not large enough to induce the consumer to sacrifice his taste and buy wheat.⁷ This leads to an increase in the demand for rice and a reduction in the demand for wheat in the open market, and hence, the market price of rice increases and that of wheat decreases.

The rate of decline (12.3 per cent) in wheat prices is, however, quite significant considering the fact that aggregate supply of wheat remains unchanged and the open market supply increases by only 3 million tonnes (i.e. 10 per cent). This tends to suggest that without the support of the government policies, market price of wheat will crash. In other words, the present policies help maintain an artificially high market price for wheat. This has an adverse impact on rice price, which prevails at a relatively low level because of the substitution of wheat for rice, induced by the artificial price structure and distribution policy in the PDS.

As the artificial price structure in the PDS does affect market prices substantially, the market is sending wrong signals to the producers. This is one of the most important reasons for the relatively slow growth in rice production and a high growth in wheat production in the country. During the decade ending at 1985-86 the per capita availability of rice has not shown any increase, while that of wheat has gone up at the rate of 3.5 per cent per annum. Technological factors apart, favourable input-output price policies have contributed to this high growth. However, much of this achievement of wheat is at the cost of rice and other crops which did not get the attention they deserved.

This market distortion due to government intervention can be corrected to a large extent by the suggested change in policy. In the long-run, this policy change would lead to a desirable change in cropping pattern by inducing farmers in the wheat growing areas to switch over to other crops (primarily pulses, oilseeds, coarse cereals, etc.) from which lands were diverted to wheat, partly because of favourable input-output price policies and partly due to technological advantage enjoyed by wheat. It may be noted that a diversion of land to other crops will not necessarily reduce total foodgrain production. In fact, as we shall see

later, the total agricultural output will be higher, if the saving in subsidy is invested in increasing the irrigated area under rice and other crops rather than wheat.

The effect of this policy change on foodgrain consumption is also favourable, as aggregate cereals consumption increases by 0.15 per cent, following a decline in the overall price index of cereals (1.37 per cent). Apart from correcting the market distortion, the suggested policy change would have favourable impact on other relevant economic parameters. The doubt that a reduction in budgetary food subsidy may adversely affect food consumption, CPI (Consumer Price Index) and wage bill appears unfounded (Table 3). The Government wage bill, in fact, will decline following a decline in the CPI.

S-B Operational Efficiency in Food Management Increase

An increase in the operational efficiency of FCI and other State agencies would reduce the operational cost of the government food supply management. If the cost reduces by 10 per cent then:

- budgetary food subsidy declines by 11.4 per cent.
- irrigated area, total cropped area and foodgrain production increase by 0.3 per cent, 0.7 per cent and 0.3 per cent respectively;
- prices of rice, wheat and other grain crops decline by 1.3 per cent, 1.2 per cent and 0.9 per cent, respectively; and
- the CPI and wage bill decline by 1 per cent each.

Thus, even without any structural change in the PDS, the operational efficiency of the public agencies can reduce food subsidy and foodgrain prices. As shown in Table 2, the operational cost, particularly the cost of public distribution of grains, has been growing at a very high rate. Measures like mechanisation in selected areas, linking large godowns with rail-head, avoidance of multiple handling, minimisation of storage/transit losses, optimum transport planning and better utilization of storage facilities could contribute to a significant reduction in the operational cost of FCI. This aspect should be given utmost priority by the government, as this inefficiency is one of the most important reasons for the growing budgetary food subsidy in the country.

S-C Reduction in PD and Operational Cost

In this situation, public distribution of grains is reduced by 4 million tonnes and the operational cost of the public agencies is reduced by 10 per cent. This leads to:

- a reduction in food subsidy by 17 per cent;
- an increase in irrigated area by 0.46 per cent, in total cropped area 0.1 by per cent and in foodgrain production by 0.44 per cent;
- an increase in rice price by 3.5 per cent and a reduction in the prices of wheat and other grains by 13 per cent and 3.6 per cent respectively; and
- a reduction in the CPI and government wage bill by 2.4 per cent each.

These results suggest that some marginal changes in policies with regard to PDS and an increase in operational efficiency in food management can reduce budgetary food subsidy by more than Rs.370 crores without any adverse economic impact.

S-D Additional Irrigation Investment in Rice Growing Areas

In this situation, the saving in food subsidy arising out of a reduction in public distribution and operational efficiency is invested in irrigation as in S-C, but the additional irrigation potential so created is devoted to rice and non-grain crops and not to wheat. As a result of this policy decision:

- fertilizer consumption increases by 1.44 per cent;
- fertilizer subsidy increases by 1.45 per cent;
- foodgrain production rises by 0.62 per cent;
- rice price rises by 3.1 per cent;
- wheat and other grain prices decline by 12.83 per cent and 3.67 per cent respectively;
- cereal consumption increases by 0.56 per cent; and
- CPI and government wage bill decline by 2.5 per cent each.

The results suggest that foodgrain production and consumption will be higher if the due share (as determined by the behavioural relationship) of wheat in the additional irrigated area is diverted to rice crop. This happens because the marginal productivity of fertilizer in rice is higher than that in wheat and availability of irrigation is the major deter-

minant of the demand for fertilizers. As mentioned earlier, the marginal share of wheat in irrigated area is quite high at present. To maximize the return from investment in irrigation and to increase foodgrain production, a conscious policy decision is needed to arrest this trend.

IV. CONCLUDING REMARKS

The analysis carried out in the paper suggests that it is possible to check the growth in budgetary food subsidies without compromising with the basic objectives of the food policy. The feasible measures in this direction are: a reduction in the volume of public distribution of wheat and rice by eliminating the relatively better off section of the present beneficiaries from the purview of the PDS; an improvement in the operational efficiency of the public agencies involved in the management of foodgrain operation and open market operation by the public agencies whenever the level of stock exceeds the desired level. The impacts of these measures on prices and government budget in the short-run are favourable. It is noted that any policy change in the PDS that has the potential of reducing food subsidy is likely to affect wheat output adversely in the short-run as the market price of wheat is highly sensitive to such changes. However, if the suggested policy changes are backed by suitable investment decisions with regard to irrigation infrastructures, foodgrain output in the medium and long-run is likely to grow at a faster rate and compensate for the marginal loss in wheat output. The resources needed for the creation of additional irrigation facilities can be generated through a reduction in food subsidy itself.

The long term impact of the suggested policies, therefore, are likely to be very favourable for growth and equity. They would also serve as correctives to the market distortion that has led to an unbalanced agricultural growth in the country. The growth in foodgrain output that has taken place during the last two decades, has primarily been the contribution of wheat. There has been practically no growth in the per capita availability of rice which is the preferred cereal to the majority of the population in the country, while per capita availability of pulses which is the major source of protein for the poor has declined. The production of oilseeds, the major source of vegetable fat, has not kept pace with its demand. The prices of pulses and oil have soared high. The strategy of excessive reliance on wheat production through favourable price and investment policies is perhaps, one of the factors responsible for the imbalance in agricultural growth in the country. The current levels

of subsidy in food, fertilizer, irrigation and electricity (for agriculture) are sufficient indications that this unbalanced growth is not sustainable. It is necessary to have a broad-based growth strategy which would lead to a balanced and sustainable growth. This would call for judicious investment decisions and more investible resources. A reduction in unproductive expenditures, particularly subsidies can enhance the availability of the much needed investible funds for productive purposes. Another simulation experiment with the model used suggests that a slightly higher growth in irrigation can make withdrawal of fertilizer subsidy feasible without any adverse impact on agricultural growth. As in the case of food subsidy, withdrawal of fertilizer subsidy too would lead to a reduction in wheat output. But in both, the growth in outputs of foodgrain and other crops would be higher.

Judicious investment decision with regard to irrigation infrastructure would also have other favourable impacts in the long run. For example, stability and growth in output in areas (the Eastern and Central India) susceptible to the vagaries of monsoon would, on their own, reduce the requirement for public distribution and buffer stock. This, in turn, would lead to a reduction in the infructuous expenditure currently being incurred by the country in transporting grains from the Northern region to the rest of India, in creating storage potential and in maintenance of stock.

It may, however, be mentioned that there is always a gestation lag between investment in irrigation infrastructure and the output response. The suggested policy changes may (though not necessarily) lead to a fall in foodgrain production (as the growth in wheat output would certainly fall), if the creation of additional irrigation potential takes a long time. To avoid this, it would be necessary initially to spend a large part of the investible fund generated through a reduction in subsidy on irrigation projects under construction and on better water management practices so that an increase in the availability of irrigation materialises in a relatively short period.

Ergebnisse: Mathematik



Table 1

Food Situation & Food Subsidy in India

	Net Pro- duction	Procure- ment	Net Import	Stocks End- December	Public distri-	Food Subsidy
	(In Million Tonnes)					(Rs. crores)*
1970	87.06	6.7	3.35	5.50	8.8	18
1975	87.35	9.6	7.53	8.29	11.3	250
1980	95.99	11.2	-0.34	11.74	15.0	650
1981	113.39	13.0	0.66	11.50	13.0	700
1982	116.63	15.4	1.58	12.77	14.8	710
1983	113.33	15.6	4.07	15.49	16.2	835
1984	133.33	18.7	2.37	22.55	13.3	1100
1985	127.35	20.1	-0.35	25.21	15.8	1650
1986	131.64	19.7	-0.06	23.63	17.6	2000
1987	125.49	15.7	-0.38	14.14	18.4	2200
1988	121.11	14.1	1.87	9.50	18.3	2300(BE)

* Refer to the financial year 1970 means 1970-71

- Sources:**
1. Economic Survey.
 2. Bulletin of Food Statistics.
 3. Annual Reports of the Food Corporation of India.

Table 2
Unit Subsidies, Unit Operational Costs & Prices - Rice & Wheat

Consumer Subsidies	Procurement Prices (Common Varieties)		Procurement Costs		Distribution Cost		Economic Cost of FCI		Issue Prices (Central)		Unit Value of Previous year's stock	
	Rice	Wheat	Reddy	Wheat	Rice	Wheat	Rice & Wheat	Rice	Wheat	Rice	Wheat	Wheat
30	17.71	20.14	95	115	10.13	18.80	22.66	168.73	148.21	150	130	153.50
31	34.03	40.20	105	117	10.05	21.31	29.05	181.20	162.10	150	145	164.00
32	42.94	53.73	115	130	9.54	22.32	37.87	201.10	168.70	165	160	188.20
33	53.35	55.40	122	142	9.54	24.28	43.91	223.90	189.20	175	172	207.30
34	66.70	49.07	132	151	11.11	24.17	46.47	275.54	233.48	188	172	224.80
35	74.87	63.46	137	152	17.32	26.31	51.90	298.81	239.44	208	172	245.30
36	77.34	69.57	142	157	15.18	31.61	53.19	307.62	242.80	217	172	253.70
37	74.58	79.04	146	162	12.98	34.81	61.23	320.88	262.12	231	190	260.00
38	80.94	82.79	150	166	13.16	34.13	62.05	327.57	274.73	239	195	267.10
39	105.42*	90.65*	160	173	16.95	35.14	68.19*	370.50	298.94	244	204	295.30
al												
h	15.18%	10.70%	5.41%	5.01%	6.75%	6.45%	11.28%	9.35%	7.95%	6.27%	4.36%	5.72%

-81
(8-89)

1. Central issue prices have been changed more than once during a financial year. The prices that prevailed for the larger part of a year have been presented in the table. Because of intra-year variation in issue prices unit subsidies presented in the table are not necessarily equal to the difference between economic costs and issue prices.

2. Annual Reports and Performance Budgets of the Food Corporation of India.

3. Budget Papers, Government of India

4. Bulletin of Food Statistics.

5. Estimates.

Table 3

Comperative Static Results of Reduction in Food Subsidy.

Item/Units	Base Values	Percentage Change From Base			
		S-I	S-II	S-III	S-IV
1. Irrigated Area in million hectares	57.60	0.18	0.31	0.46	0.4
2. Gross Cropped Area in million hectares	178.10	0.04	0.07	0.11	0.11
3. Fertilizer Consumption in million tonnes	8.60	0.35	0.70	0.93	1.42
4. Net Foodgrain Production in million tonnes	140.00	0.17	0.30	0.44	0.62
5. Non-foodgrain (Agri.) Production - Index	148.90	0.07	0.23	0.34	0.33
6. Food Subsidy in Rs. '000 crores	2.10	-6.59	-11.4	-16.98	-16.92
7. Fertilizer subsidy in Rs. '000 crores	2.10	0.38	0.66	0.98	1.45
8. Wholesale Market Prices					
- Rice (Rs./Q)	274.20	4.77	-1.25	3.55	3.10
- Wheat (Rs./Q)	201.70	-11.83	-1.21	-13.03	-12.83
- Other foodgrains - index	392.30	-2.66	0.93	-3.57	-3.67
- Non-food (Index)	303.60	1.92	-0.52	1.41	1.23
- Manufactured (Index)	687.10	-1.36	-1.01	-2.35	-2.51
9. CPI - index	687.10	-1.36	-1.01	-2.35	-2.51
10. Government Wage Bill in Rs. '000 crores	19.10	-1.37	-1.02	-2.37	2.53
11. Total cereals Consumptions in million Tonnes	123.70	0.15	0.26	0.38	0.56

Note: In working out the funds available (from saving in food subsidy) for creating additional irrigation potential the increase in fertilizer subsidy arising out of extra fertilizer consumption has been deducted from the saving in food subsidy.

Notes & References

1. *Report of the Economic Advisory Council on the Current Economic Situation and Priority Areas for Action*. Government of India, Ministry of Finance, December 1989.
 2. The Performance Budgets of FCI give the methods of computing subsidies.
 3. Annual Reports of FCI give the break up of the cost of maintaining buffer stocks under the following heads:
transit shortages; storage shortages; freight, handling charges, administrative overheads; interest and storage costs. Of these the last two account for more than two-third of the total cost.
 4. The study entitled *All India Grain Storage and Movement* carried out by the National Council of Applied Economic Research, 1988, contains a detailed analysis of the variation in different components of costs of operation of FCI. The Report also suggests the areas where scope for minimizing operational cost exists.
 5. The frame work of the model is presented in the form of a Flow-chart. Since consideration of all the variables in the chart would make the presentation cluttered, it is presented in aggregative form. Thus, agricultural production block contains production of rice, wheat, other cereals, other good grains and non-grain crops, each of which has been given a separate treatment in the model. In the reduced form the model contains 64 linear equations.
 6. The PDS quota for some of the states are as follows: A.P. - 25 kg rice and 25 kg wheat/month/household; Bihar - 4 kg rice and 12 kg wheat/month/unit; W.B. 1.7 kg rice and 2 kg wheat/week/adult; Orissa - 13 kg rice and 30/35 kg wheat/month/household; Kerala - 0.220 kg rice and 0.240 kg wheat/adult/day.
 7. It may be mentioned that for a commodity subject to partial rationing, ration quota and issue prices (in addition to other variables) affect the market demand for the commodity. In the case where two substitute commodities are subject to partial rationing, as in the case of rice and wheat in India, the ratio quota and issue prices of both would appear as shifter parameters in the market demand relation. This aspect has been considered in the determination of equilibrium prices of rice and wheat in the model. See "Public distribution system and behaviour of open market prices of foodgrains in India" by S.P. Pal and B. Reddy, *MARGIN*, Vols. 9 & 10, Nos. 4 & 1, 1970.
 8. The data on prices of rice and wheat in different states show intra-year and inter-annual variations. Also sometimes these data are not strictly comparable because of differences in varieties. However, for coarse varieties of rice and wheat the wholesale market prices are small in most of the state.
- Source:** *Bulletin of Food Statistics*.

11. The Rationale, Possibility and Approach to Planning for the Right to Work

Kamal Nayan Kabra

For the first time serious thinking seems to have been devoted to the question of ensuring the right to work as a fundamental right to the citizens through a constitutional amendment. The NF Government has clearly committed itself to this task. This programme links up directly with the programme of fulfilling the minimum needs of the people, directly affecting some 322 million Indians. The guarantee of minimum wages and social security along with provision of minimum needs are all related to the right to work and form part of NF election Manifesto.

This commitment has already stirred a hornet's nest. While some stalwarts of conventional wisdom have apprehensions regarding the feasibility of making the right to work an enforceable right at the present juncture owing to the stage of development of economy, others are not clear about the implications of putting this right into the chapter on fundamental rights in our constitution. One has also seen some people petulantly putting a question mark on treating work as a right and in fact, consider it a 'dangerous promise' especially by giving vent to some apparently high-minded concern over over-staffing and the lack of 'workethic'.

Indian planning has always made a commitment of the objective of full employment, though it tended to treat this as a long term promise. It was a long term objective 40 years ago and it remains a long term objective even now, notwithstanding the sustained growth in commodity production which has taken place during this period. The irony of indefinite postponement of full employment as a long term objective has hardly dawned on those who are trying to mock at the promise of

making the right to work a fundamental right of Indian citizens.

It may be pointed out that our planning so far has been in terms of growth of output and investment and has treated employment as a by-product of output growth. It seems that the validity and relevance of a reverse sequence was tacitly rejected. It is true that employment means productive employment and involves increased production. However, this does not amount to treating employment as secondary and output as primary, unless production fetishism is so deep-rooted as to make one ignore the human factor involved in loss of labour power implied by widespread unemployment. Increasing production with limited employment base amounts to granting heavy weightage to those already endowed with property and work incomes. On the contrary, the guarantee of work means granting access to means for fulfilling minimum needs and social security against loss of work/income for all. Way back in 1955, Mandelbaum discussing problems of industrialisation considered employment generation a contribution to productive efficiency. He maintained that "when total capital is limited the gain in aggregate income due to higher employment per unit of capital may offset the loss in efficiency."

It may also be pointed out that the approach so far has been to treat production as a function of availability of factors of production in proportions determined by prevalent technology. The fact that a country like India has a vast and growing reserve of manpower was taken to indicate a relative shortage of capital. Hence, it was maintained that employment growth is dependent on the growth of capital accumulation. Once a sufficient stock of material capital goods is available, our vast manpower can be set to productive work. The fact that we had a low rate of investment of less than 10 per cent during early 1950s was taken to constrain the capacity to provide employment. Now that the investment rate is around 25 per cent of GDP, employment growth has not even been able to clear the backlog of accumulated unemployment is blamed on worsening capital output ratio, partly reflecting the employment-inimical technical choices involved in the pattern of growth experienced so far. But it has to be realised that the pattern of demand resulting from low level of employment generation and resulting huge unemployment contributed in small measure to such technological choices and pattern of growth restricting work opportunities. Limited employment in the initial situation gives rise to a pattern of income distribution and demand which restricts further expansion of employ-

ment opportunities, notwithstanding easing of supply constraints like availability of infrastructure, finance and their low prices to motivate entrepreneurial response. Obviously, with initial large spurt in employment the sequence works out itself in a positive direction providing sound basis for generating built-in processes towards full employment. Thus output *versus* employment theses are based on narrow, static views.

It is not intended to go into the question of how and why the employment objective was downgraded and its consequences. The fact that poverty is widespread and acute malnutrition persists and there is a limited market for ordinary goods of mass consumption, including foodgrains, are sharp indications of supply-centred planning and its neglect of demand and employment aspects. In fact, it also indicates an economistic approach which excluded the questions of purposive, meaningful and effective participation by the people in the development process, which cannot come about, economically and politically or socially, without massive growth or employment opportunities commensurate with the size and growth of our work force, particularly in the working age-groups and with education. That some 10 million matriculates are unemployed is a disturbing pointer of the gravity of the failures on this front. Now that a political commitment has been made to enshrine the right to work as a fundamental right, it is worthwhile to explore its implications.

It is apparent that the right to work at the present stage of development of our economy with its accumulated distortions cannot straightaway lead to waged employment for every willing adult. Neither, the pattern of allocation of public resources, nor the decision-making motives and processes nor the command of the State over resources nor the pattern of demand and availability of technologies are such that during the Eighth Plan Period either organised sector wage employment can be given to everyone or own-account work opportunities of comparable income levels can be ensured. This requires not only massive additional resource mobilisation, a point which is generally emphasised but, much the most important, it requires a massive restructuring of the economy in order to clear it of distortions and biases. It requires re-allocation of resources away from the production of high-price luxury and semi-luxury goods which are accessibly only to high-income groups and to low-priced necessities and minor comforts which

the newly employed can afford at the wages they are likely to obtain. However, during the Eighth Plan period itself, it is possible to bring about a very sharp increase in the rate of growth of employment as well as of creation of work and income-earning opportunities on the basis of tiny entrepreneurship and micro enterprises and re-allocation of productive resources in favour of mass-consumption goods. The mass consumption goods, by their logic of production, factor-proportions, pricing, location and ownership and management patterns are, in effect, mass employment goods. It would be futile to expect that we persist with the existing pattern of production and only through additional resource mobilisation but with prevalent technological, locational and entrepreneurial patterns or merely through transfer payments move towards fuller employment.

What is required immediately is that those remaining outside regular wage employment or regular own-account work which gives income nearly comparable to organised sector average wage rate have to be either given public private or joint sector wage employment or self-employment above minimum wage level or are provided work on employment guarantee programmes (both regular and seasonal) on projects for meeting the minimum needs and the people to whom none of the above are available have to be given unemployment allowance, i.e. that have to depend on transfer payments.

It is no-point hazarding a guess about the possible stepping up of the rate of growth of employment without a detailed exercise of plan formulation at the national, State and district levels. However, what might be suggested at this stage is that making active manpower planning the primary building block for formulating the new plan can contribute significantly to attempts aiming to make a net dent in the magnitude of unemployment prevailing in the country.

Some of the elements of the employment-oriented approach to planning may be mentioned. In agriculture, it would involve making small and medium farmers the fulcrums of planning at local level planning. It would also mean greater emphasis to dry-farming and bio-technology (bio-fertilisers, bio-gas, etc.) for increasing agricultural production alongwith massive emphasis on minor and medium irrigation in areas in which this is possible. In industry, the employment oriented planning would require detailed techno-economic surveys of various regions in

order to identify and prepare shelves of small and medium industrial projects making use of local resources, upgrading existing products and skills, improving existing products, introducing affordable need based new products and building up linkages between all these projects. It would mean de-emphasis on many recently introduced high-priced goods from food-processing, electronics, furnishing, fittings, furniture and other frivolities industries.

The infrastructural support facilities and new investments and production tasks for basic capital goods and intermediate goods industries have to be derived from these ground level small and medium industrial products, dry farming technology, etc. The choice of techniques has to be such that in the process of increasing production, local manpower is involved with gradual, marginal improvements over their existing levels of productivity, in such a time-frame that the productivity levels are constantly upgraded incrementally. Technological leap-frogging in an imitative pattern of industrialisation is just the opposite of what is needed by broad-based democratic development. In other words, what it means is that no fancy comparisons of productivity per worker or per unit of capital have to be attempted between the small, medium and large sectors, let alone the question of comparing international factor productivities particularly for non-traded or non-tradeable goods. Large productivity gains involving limited employment growth may well be sacrificed in favour of small but sustainable productivity gains which involve large employment increases. One can not afford to make the best, the enemy of better; if we can grow two blades of grass where only one grew so far, and in the process involve an increasing number of our citizens productively in the development processes, we are laying secure foundations of integrated development in which the mis-match between output and employment growth is gradually eliminated.

It is clear that with the employment-oriented approach it will not do simply to encourage the existing market-determined pattern of production. It means a massive re-development and re-allocation of resources to ensure that during the Eighth Plan period the production of highly capital-intensive and luxury products is curtailed and a good part of such existing production is directed exclusively to the export markets. Naturally, a process of planning which not only plans additional output and employment but also changes existing employment and output patterns does cause some dislocation and hence one has to move very

cautiously and carefully. Nevertheless, move one must if the employment objective is to be taken seriously. The first and the foremost implication of making the right to work a fundamental right is that the Eighth Plan becomes a qualitatively different plan; it becomes an employment plan and a plan for correcting the distortions introduced by imitative, elitist and investment-centred planning a pattern and process of planning which has fostered monopolies, 'black money', consumerism, excessive external orientation, or in one word, maldevelopment.

It may be difficult for the Eighth Plan to clear the entire backlog of unemployment and the problem of low productivity, ineffective employment. In any case, immediately after the right to work becomes a fundamental right, it would be essential to ensure that this right starts making an impact on the lives of the people. It has to be a right which makes the beginning of a qualitative change in the economy; the working poor have to be ensured a place in the sun. It means those who are unable to find employment, supplementary, seasonal employment or own-account work of sufficient productivity and earning capable of taking care of a minimum of their personal and family needs, will have to be given some work or an allowance in lieu of it by the state. Obviously, this guarantee means that the state has to undertake a large number of rural and urban works programme on which those failing to find regular income-earning opportunities are to work at the minimum wage level. The scale of present employment programmes is determined on the basis of what the fiscal/planning agencies can provide. With the grant of the right to work, the size of such programmes has to be such as to cover every willing adult.

Such a national employment guarantee scheme has to be a modified and improved generalisation of the Maharashtra employment guarantee scheme. For one, the wage level has to be reasonable rather than a mere national wage. It means either it has to be the minimum wage or the average prevailing rate. Only then the employment so guaranteed would become a real one rather than notional. Second, such works have to be of a non-going character and have to be extended to urban areas also. A work opportunity very far from normal residence fails to make sense. If these programmes have also to acquire economic meaning they have to be integrated with the regional and national plans and have to have sufficient sectoral diversity to be mutually complementary. They

may cover public works programme like roads, public buildings, minor irrigation projects, social forestry, extension of new dry-farming techniques, civil works for small and medium industries and newer projects like bio-gas plants, drinking water supply schemes, bio-fertiliser making units, adult and universal literacy programmes etc. Many innovations would arise if local level initiative is unleashed for taking up these projects.

These programmes would be handicapped by the lack of useable statistics on the size of low productivity ineffective employment in the country, with its regional and skill wise disaggregation. However, wide publicity given to the availability of guaranteed work opportunities would make people trail to centres where they can register for employment opportunities. The financial, physical and organisational resources for such a programme may appear to be formidable but if this employment planning is made the central core of the Eighth Plan and all its sectoral and regional programmes, it would require both a re-allocation and a manageable amount of overall resources mobilisation for making this promise a reality. Fiscal, monetary and trade policies have to be suitably readjusted in order to ensure not only adequate finances but also enhanced supply of wage-goods. Price policy and enlarged PDS would be important component of the new policy-package.

The current *ad-hoc* semi-productive and mutually unintegrated rural employment programmes like JRY or its earlier incarnations have to be replaced by a comprehensive national employment guarantee programme. Given the endemic character of the problem of unemployment in our country, such programmes cannot be *ad-hoc* and temporary ones but we will have to continue regularly and for quite sometime in the foreseeable future. It is likely that many programmes for the tiny, artisan and cottage industry will have to be merged or closely associated with the employment guarantee programme on the national scale and as integral, in fact the central, part of the Eighth Five Year Plan.

Given the paucity of resources, difficulties in organising such a large-scale programme in every nook and corner of the country and perhaps its inability to interest certain sections of population, it is also essential that those who cannot be provided work even under the national employment guarantee programme should be offered an unemploy-

ment allowance. This might be essential even for those people who become temporarily unemployed or are waiting for regular employment; for example, the school and college leavers. For this group of people a modest amount of unemployment allowance for a limited period of time has to be offered after which either they are able to find a regular employment or have to be employed on a project under the national employment guarantee programme.

We have outlined some very broad principles on the basis of which the right to work can made a reality. Its organisational, management and resource implications have to be worked out through a number of careful exercises, particularly with a view to dovetail these schemes with the national plan. But it may however be pointed out that there are some fairly obvious things like the decentralised nature of these exercises and the consequent responsibility of the States and lower level planning agencies regarding these programmes. It also means output planning will no longer be the initial, starting point of plan-formulation: the plans would start with the exercise of usefully employing the available manpower and enhanced output flows would be the outcome of employment planning. However, for reaching broad sectoral and inter industry consistency in order to ensure that bottlenecks in supply do not hamper the programme, an iterative exercise of arriving at inter-sectoral and inter-industry-balance and various broad real and synthetic macro balances (without arithmetic and unrealistic precision) would indeed be essential. Here it may be pointed out that many policy initiatives in the areas of supply and distribution of commodities, their prices and workable policies, regarding incomes, wages and prices etc., would be quite useful and the entire burden of balancing need not fall on additional investment requirements and/or imports.

Ineffective employment may be taken to affect all those who are below the poverty line i.e. something like 320 million people. In broad terms, the landless agricultural workers who face seasonal unemployment, the small and marginal farmers facing similar seasonal dips in income flows, the rural artisans with low productivity, inadequate work and low incomes, the rural youth with secondary education and school 'throw-outs' aspiring for salaried jobs, rural migrants to the urban areas, educated unemployeds and large number of low and irregular income informal sector wage workers and own-account workers may be considered the main groups for whom the employment guarantee and social

security plans have to be devised. Many of the schemes/programmes have to be seasonal and each one has to be fine-tuned to local conditions. It means decentralisation has to be an important feature of the methodology of implementing the right to work.

Certain programmes and policies which have recently been accepted by the NF government would facilitate the implementation of the right to work. At the basic level, the rejection of the trickle-down approach to development planning implies making programmes of direct attack on poverty, unemployment, inflation and external dependence the main pillars of planning and policy. One presumes that rejection of trickle-down approach implies rejection of both market-processes based trickle-down as well as state-sponsored trickle-down through so-called absolute poverty-alleviation programmes. It means the first and primary task of development planning is to ensure that 320 million people who are below the presently-defined poverty line are given the economic means, including through transfer payments, in the immediate runs, a certain national minimum. Allocation of 50 per cent of plan outlay to the rural sector is a step facilitating employment orientation which gradually builds up the pursuit of higher productivity. The implementation of the policy that the "production of basic consumer goods will be reserved for cottage and small industries" (NF Manifesto) would help realise the goal of right to work, particularly when outlays for rural, cottage, tiny and small sectors is raised from current abnormally low levels to levels commensurate with their employment potential and present weight in industrial structure. The policy of minimum wages and remunerative farm prices correcting the tilt against agriculture in term of trade would help create a pattern of demand conducive to employment-intensive pattern of industrialisation. Curbs on high-tech imports, black money and luxury consumption, and rationalisation of direct and indirect taxes with a view to place tax burdens according to the carrying capacity would help widen the home-market for mass consumption goods and lay the foundations for integrated (as opposed to dualistic or enclave) industrialisation. These changes may usher in structural changes in favour of commodity-producing sectors and towards removal of the mismatch between the output and employment shares of the basic sectors of the economy.

Among other things, certain changes in the further extension of Green Revolution Strategy are called for in order to make it serve the

employment objective as well. For one thing, excessive use of chemical fertilisers has had many adverse consequences in terms of unit cost of production, energy use, BOP deficit, ecological imbalances and distortions, poor backward linkages from the employment angle, enhanced role of MNCs, etc. Therefore a shift towards bio-fertilisers, crop-rotation, etc. and natural farming is needed. It would help generate a large number of rural jobs. For many areas which cannot have access to assured, irrigation water, vigorous adoption of dry-farming practices is an immediate imperative.

Small farmers have to be given enhanced access to resources in order to make use of modified green revolution package along with use of bio-fertilisers, minor irrigation, etc. scientific warehousing should have a good employment multiplier. Mechanisation, use of combine harvesters, etc. should be stopped let alone any policy of their direct or indirect subsidisation. Machines for rice transplantation, etc. should also be banned for the present. Instead better farm implements and hand tools should be made available for increasing the effectiveness of labour as also for better symbiotic relationship between agriculture and industry.

A number of change in fiscal and financial policies may contribute to greater employment creation. Incentive to industries should not be related to size of capital investment. Instead, employment generation should be made the basis of encouraging industrial activity. In project appraisal, determination of weights and shadow pricing, size of additional employment should receive high priority. Such guidelines should also be followed by the financial institutions providing term-loans. R & D programmes, technology missions and science policy, etc. have to be redesigned with a view to ensure the right to work.

In sum, the pursuit of growth of production has so far permeated every aspect of Indian Planning and policies as the basic desideratum. This needs to be replaced by employment generation and step by step rising levels of productivity in an environmentally sustainable, self-reliance fostering and culturally acceptable manner. This change cannot be postponed under the guise of an illusory long-term. Substantive beginnings have to be made here and now.

The right to work is a long overdue step towards effective social democracy. GDP planning and its economistic overdose have made a mockery of what is described as India's democratic planning which has

left with each plan more people ineffectively unemployed than what it began with. This is a situation which introduced no scheme of social security for the 'electoral masters' who are supposed to have given themselves a government which is their own. The realisation of employment guarantee over the period of the Eighth Five Year Plan, may well be regarded as the most democratic and people-oriented step undertaken so far in the country. It certainly is no easy task. Many vested interests which flourished under the output and investment centered model of planning may offer apparently scientific and technical objections to planning, guaranteeing the right to work. Therefore, it is essential that the people are mobilised and warned against various pseudo-scientific conspiracies.

12. Indian Agriculture: Present Challenges

B.N. Verma

Mid eighties found Indian agriculture sliding into a profound crisis marked by rising cost of cultivation, increasing dependence on expensive resources, growing regional imbalances and above all erratic crop yields under the shadow of serious drought. There have been many manifestations of the crisis and its consequences as evident from the farmer's agitation in Western UP, reports of the wayward behaviour of the soil, sinking water tables, worsening shortages of fodders and fuels and the growing misery of poor in agrarian community.

Agricultural production in India dipped substantially in 1987-88 after three consecutive years of stagnation following 1983-84. Even the record production of 1988-89 has done no more than to put us back on the old growth track from which we had slipped during the first three years of the Seventh Plan.

The Growth Performance

The growth performance of Indian agriculture in the wake of green revolution do not turn out to be that impressive if considered in international and future perspectives. Our long term growth rate of foodgrains production since 1970-71 at 2.6 per cent per annum has been slower than that of the rest of the world. If one compare the five yearly average of production one finds there has been distinctly declining trend in growth from one quinquennium to another starting from 1970-75. The average growth rate of production in the post green revolution period is now reduced to less than what it was during the pre-green revolution days.

The Task Ahead

By the turn of the century the population of the country is estimated to be 972 million i.e. almost 1 billion. This projection is based on the assumption of a positive impact of population control measures. Further, on the assumption that GDP will increase at the rate of 5 per cent per annum and the extent of poverty will be brought down to 5 per cent by the end of the century through appropriate redistribution measures, it has been estimated that the gross demand for foodgrains by AD 2000 will be around 240 million tonnes. This means that foodgrains production will have to increase by 90 million tonnes. In other words, what has been achieved during the last 35 years has now to be achieved in 15 years.

The Agricultural Potentiality

So far agricultural potentiality in India is concerned there exists a vast untapped production is evident from the wide gaps between the yields actually obtained and the potential yields observed on demonstration plots. As per official statistics while the actual yield in case of rice and wheat are 1230 and 1836 kgs per hectre, the potential yields in these crops are 3206 and 4010 kgs/ha respectively (1982-83). It is thus apparent that there is scope to at least double the present yield levels, provided appropriate policies and practices are followed. In the absence of any scope for further increasing the net sown area, land augmenting technology and yield improvement remain the only way to a sustained increase in the level of agricultural production. But there are constraints on both technological and institutional fronts which need to be removed through appropriate strategy.

The Specific Problems and Issues

Before discussing strategy and the steps to be taken for further development the current specific problems and issues are to be visualised. These problems and issues are related to the key inputs, the technology as such, the price and other policies and various institutions which have been mentioned below.

Water - the key or leading input

The irrigation potential created as far (74m ha) in insufficient to meet our irrigation water needs.

--- Gross sown area is expected to increase from present level of 175 mha to 200 mha by 2000 AD and 210 mha by 2025 AD - thus irrigation water requirement is to grow likewise.

The non availability of adequate cultivable land in the river courses, and suitable sites for reservoirs, lack of financial and technical resources required for inter-basin water transfers and irreversible ecological effects constrain our ability to expand the utilisation of surface water potential. Besides, the unavailability of underutilization and misuse of water due to seepage and evaporation, the drainage problems and the problems of justice with the tail enders in canal systems are equally important.

The exploitation of groundwater, sinking water table, inefficiency of public tubewells and farm size disability problems with private tubewells are also the living problems.

Fertiliser --- the rising cost of subsidy

The high cost of subsidy to the exchequer raised the question as to how far and how long the country can go on subsidising fertiliser consumption. By 2000 AD the fertilizer needs of Indian agriculture have been estimated at 20 million tonnes. The present level of consumption is 8 to 9 million tonnes. The subsidies (assuming that the present rate of subsidies continues) would come to Rs. 5000 crores in 2000 AD at 1984-85 prices. Can nation afford it? If not the alternative policy choice is to be explored.

Seed ---the dangers of the new seed policy

Keeping in view that 127 million hectares of land are annually put under foodgrains alone the existing supply of certified seeds is very much meager. Seed requirement of wheat only comes to 47.8 lakh quintals as against the distribution of certified seed for all crops at 56 lakh quintals in 1985-86.

Moreover, under the new seed policy certain categories of seeds can be imported under the open general licence by seed suppliers and farmers. Scientists apprehend new crop diseases being introduced in the country through these imported plant genetic material in form of seeds.

A correct and detailed assessment of demand for inputs lacking due to absence of professional agency.

Apathy towards dry land agriculture --- Almost 67 per cent of the cultivated area in the country is under dry land agriculture but it contributes only 43% of the total foodgrains production. This is due to continued apathy towards dry land farming and its technique in past. In the wake of secured irrigation based HYV technology of green revolution the dry farming techniques has not been given due importance. But as large part of agricultural population in poverty in this region a large part of the battle against unemployment and poverty has to be fought in dry lands.

The unbalanced cropping pattern --- problems of slow growth crops like pulses and oil seeds -

The recent green revolution has been more or less "wheat Revolution". Even premier crop like rice had a very limited performance. The long term growth rate of production of pulses (1949-50) to (1983-84) is only 0.23 per cent per annum. The growth in yield at still lower level i.e. 0.08%. The oil seed situation is also quite precarious. From 1977 onwards, the country has been importing edible oils constituting a big drain on its foreign exchange resources. This creates an imbalance in cropping pattern causing a serious setbacks to the food economy.

Agricultural Price Policy --- the major benefit to the affluent and better off section of the farming community

The recently announced procurement minimum support prices of major rabi crops for the next year 1990-91 are not only substanti-ally higher than those announced for the current year rather also significantly higher than those fixed for previous five years. As the major part of marketable surplus concentrated in medium and large farm size groups, the major benefit of the announced higher procurement prices is to go to affluent and better off section of the agrarian community. On the other hand marginal and small farmers will have to pay higher prices in the peak marketing season. The agricultural workers will have still worst lot. Apart from this it will have adverse impact on general price spiral, Government budgetary deficit, savings rate, exports etc.

The unfinished tasks of land reforms

The largest gap between the programmes of the paper and its effective implementation is in case of land reforms. In a recent seminar on land reforms organised by the Planning Commission the then Planning Minister Mr Solanki accepted that still 25 per cent of the land owning households held 75 per cent of the land while marginal farmers have been forced to lease out or sell off their holdings to keep themselves at subsistence level. Mr Solanki also admitted that the number of "benamsee" and absentee ownership has increased and a plethora of "Oral and informal" tenancies have been created in violation of the law. Likewise the official record of enforcement of redistribution of surplus land has been equally dismal. The declared surplus is far below the official estimates and what was declared surplus could not be taken into possession. Only 60 per cent of the 73.5 lakh acres of surplus land has been distributed so far. Even these are subject to delays, dispossession, fudging of revenue records and a host of other routine irregularities.

And above all the problem of growing regional imbalances

Unfortunately after four decades of development planning the regional contrast of Punjab (Northern region) and Bihar (Eastern region) agricultural economies still persists in Indian agriculture. According to recent study of Bhalla and Tyagi during the period 1962-65 to 1980-83 60 per cent of the incremental output come from 57 districts covering only a quartile of the total cultivated area and mostly belonging to Punjab, Haryana and Western U.P. In contrast 20 per cent of the incremental output during this period came from 151 districts covering nearly 50 per cent (half) of the cultivated area. Rest of the 25 districts with 7 per cent of the total cultivated area had negative contribution. We have growth "enclaves" or "islands" of Punjab, Haryana and Western U.P. (These states covering only 21 per cent of all India gross cropped area account for as high as 86 per cent of public procurement of rice and wheat) in contrast with stagnating eastern region.

The Development Strategy

In the wake of green revolution the agricultural growth strategy has been predominantly production oriented based on HYV techno-

logy. The distribution and institutional aspects have been utterly neglected with the consequences of more skewed income distribution in rural areas, polarisation of classes in agrarian community, the process of depeasantisation and pauperisation and above all inter-crops and inter-regional imbalances. The technological innovation could not be spreaded to all the parts of Indian agriculture due to institutional constraints. Thus innovations on both technological and institutional fronts are needed. Unless out moded agricultural institutions are not reformed and replaced success on the front of agricultural transformation cannot be achieved. The following steps have been suggested keeping in view this very consideration in the background of the growth objective i.e. "growth with stability, equity and regional balance."

Specific steps to be take

Efficient water management, need of effective water institutions the role of water co-operatives:

Keeping in view certain formidable technical and economic limits to efforts to create additional irrigational potential as discussed earlier, the right strategy would be to reduce the irrigation gap by efficient use of the existing potential. The water use efficiency can be improved through the promotion of (i) supplemental irrigation (ii) water conserving cropping pattern (iii) conjunctive use of ground water and surface water and (iv) Reduction in the conveyance losses by lining field channels and land preparation.

Lack of individual and group incentives to conserve water is the major cause of both for the gross misuse and wastage of surface water and over exploitation of groundwater. These problems can be solved by "water-cooperatives" as successfully working in some parts of the countrye.g. "Mohini water distribution co-operative society" in Gujarat and "Pani Panchayat Systems" in Maharashtra.

A practical model of irrigation: separate plan for minor irrigation

The failure of the big irrigation system to deliver the expected result give rise to the need of developing more practical model of irrigation. The lopsidedness of the present policy design is reflected by the fact that while Rs.15,286 crore had been spent on big projects from 1957 to

1985 to irrigate a net 15 mha or so, the total investment during the same period on forestry, soil and water conservation was only Rs.2,723 crores. In Seventh Plan also Rs.6,593 crores has been spent in the first three years to create a gross potential of not more than 1.5 mln. hectares. This represents an investment of around Rs.44000 per hectare not including the investments needed for command area development programme and drainage works to prevent water logging. Thus not giving priority to massive irrigation projects which involve huge investments, long gestation period, displacement of human and animal population etc. Weightage should be given to minor irrigation. In fact, a separate plan for minor irrigation development is very much needed.

Solution to abnormally high subsidy cost of fertilizer

As discussed earlier the burden of abnormally high subsidy cost of fertiliser in near future is going to create excessive burden on public exchequer. The question is can nation afford it? If not the alternative policy choice is to be explored. Country has to think of either alternatives preferably renewable sources of energy for agriculture in place of chemical fertilizer or the development and exploitation of traditional type of manure. But immediately these measures are not going to reduce to any significant extent the demand for chemical fertilisers. Therefore, the solution to the problem of financial burden caused by subsidisation of fertilizer consumption is to be worked out. There are two solutions (i) Fertilizer consumption by the marginal and small farmers only may be subsidised (ii) The management of public sector fertilizer plants should be improved and working of the fertilizer industry be made such more efficient that at present to render it comparative with the world fertilizer industry.

New seed policy should be reviewed and its provisions restricted

Scientists apprehend new crop diseases being introduced in the country through the imported plant genetic material in form of seeds permissible as per provisions liberalised under new seed policy. In fact, import of all seeds should be channelised through specific agency which may pass them on to the growers after thorough testing. Moreover due emphasis should be given on increasing the supply of certified

HYV seeds in view of its increasing requirements. Thus, along with quantitative supply consideration, the present seed policy needs a qualitative control also on seed supply.

Effective input management and adequate infrastructure facilities

A correct and detailed assessment of demand for inputs is the basic requirement of effective input management. The present ad-hoc system based upon assessment by the field staff or projection on the basis of past trends of growth has inherent limitations. Often due to bad assessment there is crisis of fertilizer and seed shortage during peak periods. A professional agency is, therefore, needed at the national, state and district levels for all inputs required by farmers on a regular basis. Such agency could be funded and managed jointly by the government as well as public and private sector input organisations.

Adequate infrastructure facilities is another important aspect which needs immediate attention. The development of infrastructures like seed multiplication farms, sales outlets for fertilisers, roads to step up supply of inputs among community equitably is immediately needed. Besides, strengthening of regulated markets to ensure remunerative prices to farmers, strengthening of extension system for more effective dissemination of research information and for control of pests and diseases are also needed.

Co-operatives : a forgotten alternative is to be revitalised

Cooperatives have largely failed but they must succeed. In fact co-operatives is the panacea of the ills but it has been cornered in the priority list and does not come under the main plank of the current strategy. Particularly production co-operatives are not being tried effectively. Even credit and marketing co-operatives are not that much effective. The constraints of this very important institution is to be studied and analysed and appropriate measures should be taken to make this institution effective. This should be taken as an open challenge to the social scientists.

Need for reviewing agricultural price policy

As discussed earlier the recently announced procurement prices under agricultural price policy adopted by A.P.C. are to benefit to

the affluent and better-off section of the farming community. This, big farmers bias of agricultural price policy should be removed. What is needed is a change in the fixation mechanism of support prices of agricultural products. A modest increase in these prices should be allowed after carefully weighting their probable impact on Government budget, price level, exports and above all on the income distribution.

Effective implementation of land reform measures

If a real and radical structural information is to be brought for equity and justice to vast petty peasants and agricultural labourers to which the present Government is committed, the implementation aspects of land reforms is to be reviewed and to be toned up.

Immediate steps which are needed urgently for effective implementation of land reforms are the following (i) Reviewing and redefining of land reform laws which are confusing, controversial and liable to be interpreted to serve the vested interests (ii) correcting the chaotic state of village land records (iii) removing the bureaucratic red tapism in the process of implementation.

Ownership-cum-production interpretation of land reforms

Land reforms have so far been looked at from the standpoint of landownership, land ceiling and security of tenure. However, for enabling small and marginal farmers to produce more, land reform will have to be given on ownership cum production interpretation covering steps which facilitate the more efficient use of land.

Linking land reforms with co-operatives movement

The land redistribution aspect of land reforms needs to be linked with the co-operative movement in the sense that distributing small parcels of surplus land among landless is nothing but from point of view of their unviability is just like distributing poverty in the form of uneconomic holdings. If a new pattern of redistribution process is introduced i.e. distribution of surplus land by forming co-operatives and providing them all input facilities--the land reforms will no more be a distributive measure only rather it will enhance the production

possibility also.

Steps towards removing imbalances in the agricultural economy, regional imbalances and the potentiality of eastern region agriculture

Regional imbalance is marked mainly with the contrast of continuing agricultural stagnation of the eastern region. With the proper agricultural development of this region the problem of regional agricultural imbalance can be solved to a greater extent. The eastern region has a tremendous potential for growth, fertile alluvial soils in most parts, good rainfall and plentiful availability of surface and ground water as well as abundant labour provide a strong base for achieving high productivity in agriculture. A study group set up by the Planning Commission has assessed the potential of the eastern region. According to this estimate the productivity potential of rice in the eastern region is a little over 400 per cent over the actual yield as against the corresponding figure of 244 per cent for the rest of the country. For wheat the potential for the region has been estimated at 220 per cent which is the highest as compared to other regions. The potential according to the study group can be achieved by making available technology to the farmer through proper extension and supporting service.

To remove inter-crop imbalance due weightage to pulses and oil seeds in development strategy

As a result of intensive research efforts, a large number improved, high-yielding, short duration, drought tolerant and disease resistant varieties of these crops together with corresponding management technologies have been evolved. Their yield potentials both under dry and irrigated systems are substantially higher than those of existing varieties. Proportion and adoption of these variables may open up immense possibilities of increasing production of these crops and thus evolving a balanced cropping pattern in Indian agriculture.

Dry farming needs top priority:- Keeping in view the fact that even if entire irrigation potential available in the country is exploited it can fulfil only 60 per cent of the irrigation requirement, development of

dry farming needs top priority. What is needed is that dry farming techniques developed by ICAR and ICRISAT should be taken to the farmers in order to improve production and productivity and stabilise incomes and growth in dry farming areas. This will help in maintaining both equity, inter crop balance and stability in Indian agriculture.

Invoking a second Green Revolution

Of late, an indication of a second green revolution has been observed. The features of this second green revolution are such that this may help, to a greater extent compensating the inter crops, and inter-regional inequalities created by the earlier green revolution.

Unlike the first green revolution which was essentially a breakthrough in cereal technology, the second green revolution is gaining momentum on the strength of non-cereal, non traditional crops namely, short-duration varieties of pulses and oil seeds, vegetables and fruits. The technological breakthrough in pulses and oil seeds hence come, not but in the form of HYVs but with the development of short-duration varieties. Pulses, oilseeds, potato and vegetables have acquired the status of cash crops and are beginning to replace the sugarcane (a 10-12 month crops--the traditional crop of Western U.P.)

Unlike the first green revolution where the resource rich big farmers were the prime gainers during the second revolution it is small farmers using their own family labour who are likely to benefit most from these short duration labour intensive cropping patterns. Because labour availability is the major decision criterion for the choice of this cropping pattern.

Regarding reducing down the regional imbalances the "elite" enclaves of the first phase of the HYV Programme have reached more or less the outer limits of their potential. The benefits of the new technology in these areas have therefore, been tapering off fast.

The growth curve of food production, even after averaging out the short run fluctuations, has reached a plateau. Hence a new era of growth requires a new area of growth. Though with the success of multiple cropping system dependent on efficient water management it

is most likely that the second green revolution will get anchored to the irrigated regions, more so the ground water irrigated areas, but oil seed being the key crops of the second green revolution dry land farming areas may also emerge as a gaining region.

Thus, the second green revolution having the features explained above has every possibility of compensating imbalances whether, inter-crop, inter-regional and inequality at inter-personal level caused by the first green revolution. If it successfully clicks.

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